Self Diagnosis
Supported model

SERVICE MANUAL

CPD-G410R



CPD-G410R

US/Canada Model

Chassis No: SCC-L42C-A

CPD-G410R

US/Canada Model

Chassis No: SCC-L42H-A

19CRV CHASSIS

SPECIFICATIONS

Picture tube	0.24 mm aperture grill pitch (center) 19 inches measured diagonally 90-degree deflection
Video image area	(18.0" maximum viewing image) Approx. 365 X 274 mm (w/h) (14 3/8 x 10 7/8 inches)
Resolution	Horizontal: Max. 1920 dots Vertical: Max. 1440 lines
Standard image area	Approx. 352 x 264 mm (w/h) (13 7/8 x 10 1/2 inches)
Input signal	
Video	Analog RGB (75 ohms typical) 0.700 Vp-p, Positive
Sync	H/V separate or composite sync: TTL 2k ohms Polarity Free Sync on Green: 0.3 Vp-p (negative)
Power Consumption	135 W
Deflection frequency	Horizontal: 30 to 110 kHz Vertical: 48 to 170 Hz
AC input voltage/current	100 to 240 V, 50 - 60 Hz, 2.0 - 1.0 A
Dimensions	451 x 471 x 461 mm (w/h/d) (17 7/8 x 18 5/8 x 18 1/4 inches)
Mass	Approx. 25.5 kg (56 lb 3 oz.)
Plug and Play	DDC2B/DDC2Bi GTF

Design and specifications are subject to change without notice.

TRINITRON® COLOR MONITOR

SONY®

9-978-882-01

TABLE OF CONTENTS

POWER MANAGEMENT

The power saving mode complies with the VESA Display Power Management Signaling standard. Each state of power management shall be activated by the host computer terminating the appropriate sync signals. Blanking the video must precede termination of the sync signals. The elapsed time counter shall also be controlled by the host computer. Reactivation of the monitor shall be accomplished from the host computer by re-establishing the normal sync signal.

	Power consumption mode	Screen (video)	Horizontal sync signal	Vertical sync signal	Power consumption	Recovery time	⏻ indicator
1	Normal operation	active	yes	yes	≤ 135 W	--	Green
2	Active-off (3rd mode)	blank	no*	no*	≤ 3 W	Approx. 10 sec.	Amber
3	Power-off	--	--	--	0 W (approx)	--	Off

* In this mode, the signal will appear in one of three ways: The Horizontal Sync Signal alone off, the Vertical Sync Signal alone off, or both signals off.

SELF DIAGNOSIS FUNCTION

When a failure occurs, the STANDBY/TIMER lamp will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the lamp will identify the first of the problem areas.

	Status	Area of Failure	LED Indication
1	Failure 1	+B Failure	Amber (0.5 second)/Off (0.5 second)
2	Failure 2	Horizontal/Vertical Deflection Failure, Thermal Protector	Amber (1.5 second)/Off (0.5 second)
3	Failure 3	ABL Protector	Amber (0.5 second)/Off (1.5 second)
4	Failure 4	HV Failure	Amber (0.25 second)/Off (0.25 second)
			Amber (0.25 second)/Off (1.25 second)
5	Failure 5	Aging/Self Test	Amber (0.5 second)/Off (0.5 second)
			Green (0.5 second)/Off (0.5 second)
6	Failure 6	Out of Scan Range	Green (OSD Indication)

TIMING SPECIFICATION

MODE	1	2	3	4	5	6
Resolution (H x V)	1792 x 1230	978 x 768	640 x 480	1280 x 1024	1024 X 768	1600 x 1200
Dot Clock (MHz)	271.040	78.750	25.175	135.000	59.720	229.500
HORIZONTAL						
Hor. Freq. (kHz)	110.000	60.023	31.469	79.976	48.006	106.250
H-Total	9.091	16.660	31.778	12.504	20.831	9.412
H-Blanking	2.479	4.241	6.356	3.022	3.684	2.440
H-Front Porch	0.502	0.495	0.636	0.119	0.887	0.279
H-Sync.	0.738	1.829	3.813	1.067	1.088	0.837
H-Back Porch	1.240	1.917	1.907	1.837	1.708	1.325
H-Active	6.612	12.419	25.422	9.481	17.147	6.972
(µsec)						
VERTICAL						
Ver. Freq. (Hz)	85.008	75.029	59.940	75.025	60.008	85.000
V-Total	1294	800	525	1066	800	1250
V-Blanking	64	32	45	42	32	50
V-Front Porch	1	1	10	1	3	1
V-Sync.	3	3	2	3	3	3
V-Back Porch	60	28	33	38	26	46
V-Active	1230	768	480	1024	768	1200
(lines)						
SYNC.						
Int (G)	NO	NO	NO	NO	NO	NO
Ext (H/V)/Polarity	YES +/-	YES+/-	YES +/-	YES +/+	YES +/-	YES +/+
Ext (C/S)/Polarity	NO	NO	NO	NO	NO	NO
Int/Non Int	NON INT	NON INT	NON INT	NON INT	NON INT	NON INT

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are “pinched” or touching high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
8. Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test
The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers’ instructions to use these instructions.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson’s 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

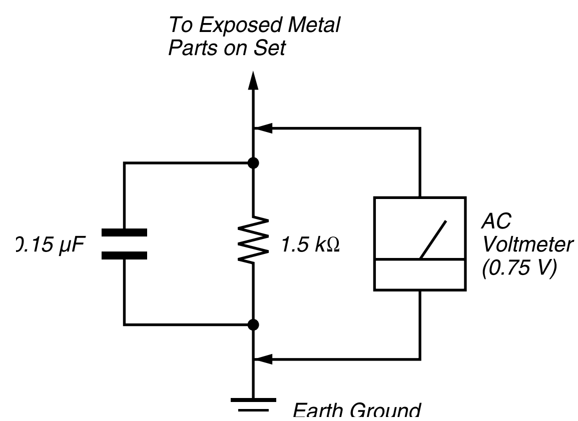


Figure A. Using an AC voltmeter to check AC leakage.

WARNINGS AND CAUTIONS

WARNING!!

NEVER TURN ON THE POWER IN A CONDITION IN WHICH THE DEGAUSS COIL HAS BEEN REMOVED.

SAFETY RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING MARK ! ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

AVERTISSEMENT!!

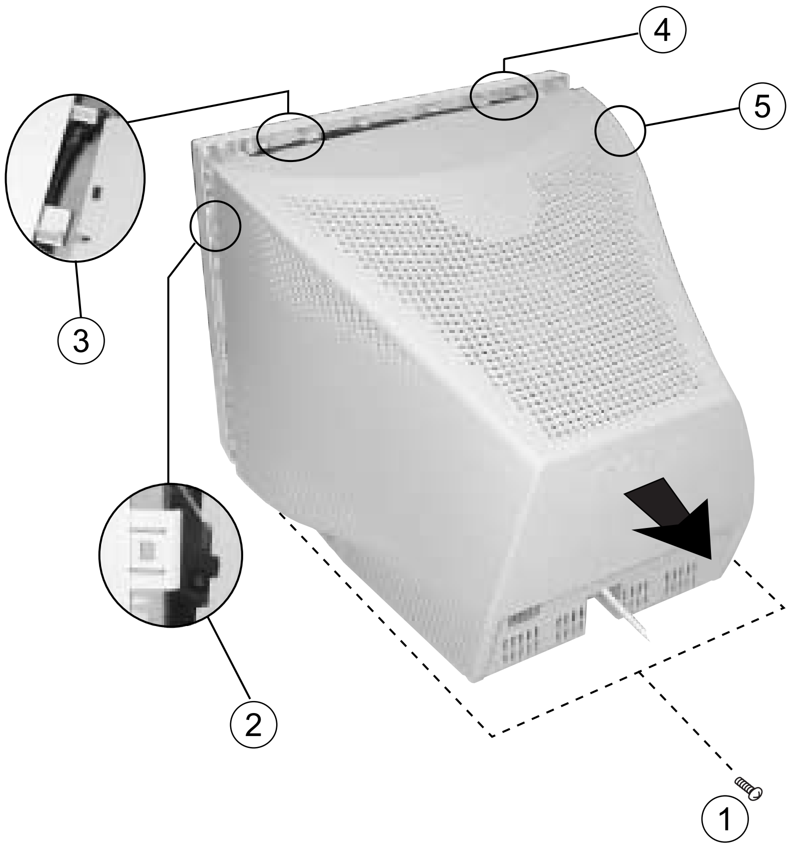
NE JAMAIS METTRE SOUS TENSION QUAND LA BOBINE DE DEMAGNETISATION EST ENLEVEE.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D’UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L’IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU’UN MAUVAIS FONTIONNEMENT SUSPECTE.

SECTION 1: DISASSEMBLY

1-1. CABINET REMOVAL

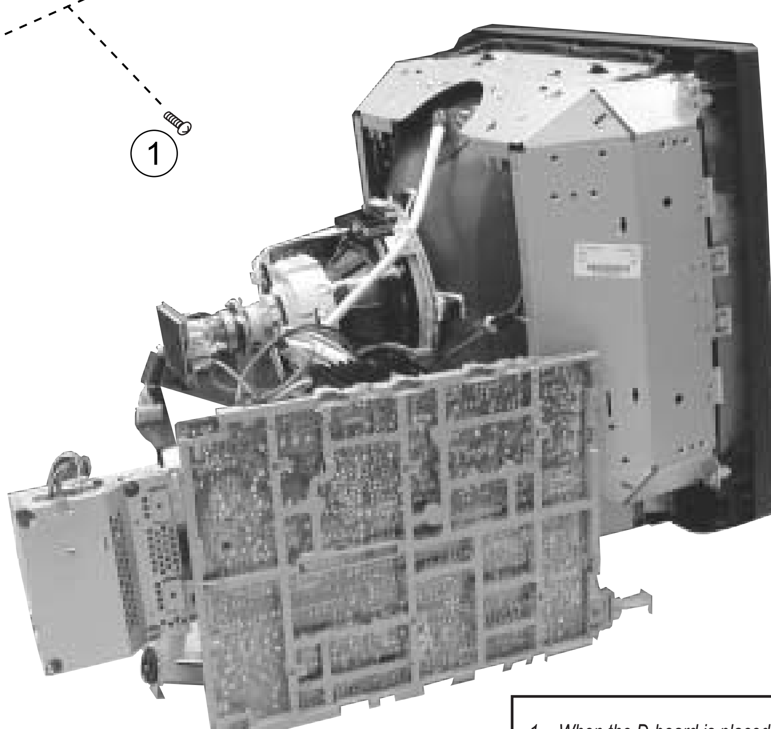


1. Remove (2) Screws (+BVTP 4 x 16)
2. Release side claw - Insert the tip of a flathead screwdriver approximately 0.25" to unlock the claw.
3. Release top claw - Working from the same side as the the claw in step 2, insert the tip of a flathead screwdriver to unlock the top claw.
4. Release top claw - Repeat Step 3 on the opposite side.
5. Release side claw - Repeat Step 2 on the opposite side and gently lift up and then back to remove the cabinet.

1-2. SERVICE POSITION

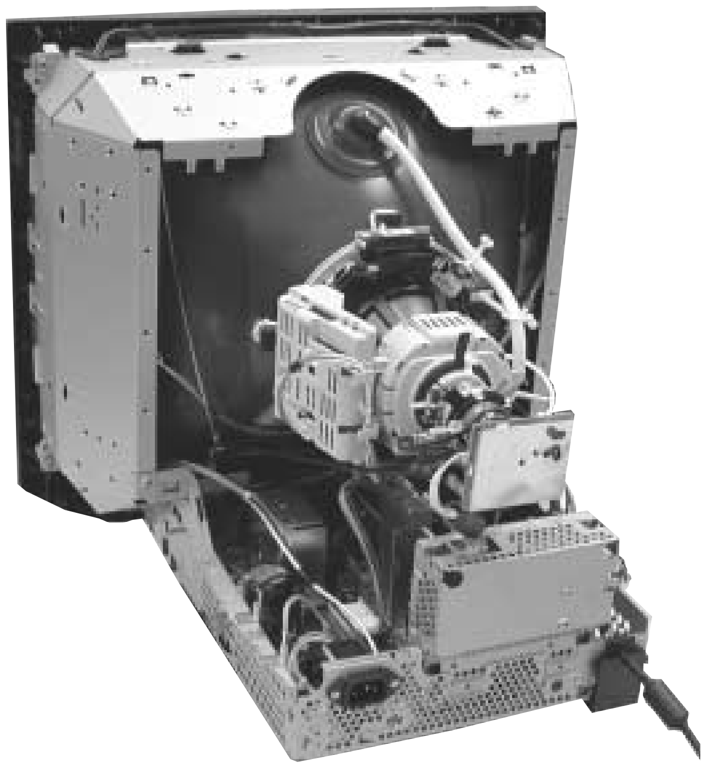
※Adaptor board (XT Mount) is reconstructed to use for this set.

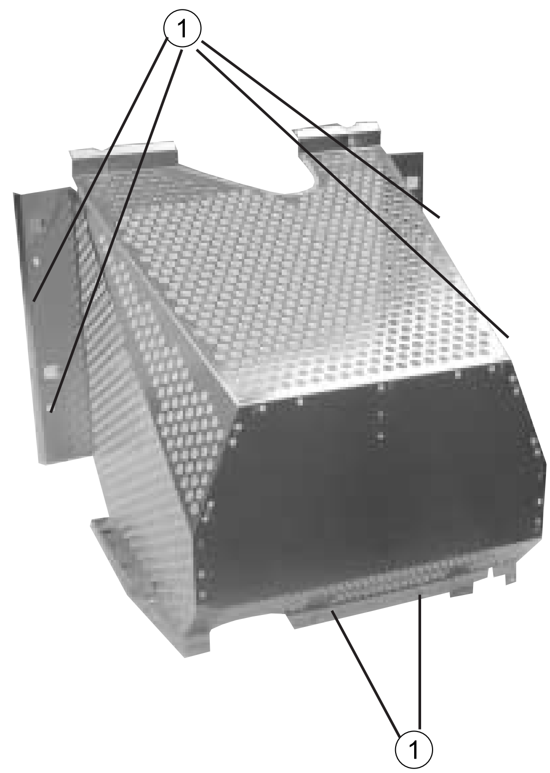
1. Prepare a connector (10 Pin: Black) (1-766-921-11), cut of the boss on the 10 pin side.
2. Remove the connector (17 Pin: Black) (CN9997), from Adaptor Board (XT MOUNT) (A-1391-123-A).
3. Install the connector (10 Pin: Black) onto XT Mount.
4. Remove the D Board.
5. Remove the Video Block Assembly.
6. Install the Adaptor Board (XT MOUNT) (A-1391-123-A).
7. Lay the Video Block Assembly over 90°.
8. Install the Video Block Assembly.
9. Put a box which is about 15 cm in height under the D Board to fix it. (Please disconnect the CN 701 first)



1. *When the D-board is placed in service position, the Safety Earth Wire (green and yellow wire) is disconnected.*
2. *After service is completed and the D-board reinstalled, the Safety Earth Wire must be reattached to the chassis with the proper screw. This must be confirmed before any subsequent procedures are attempted.*

1-3. A & D BOARD REMOVAL

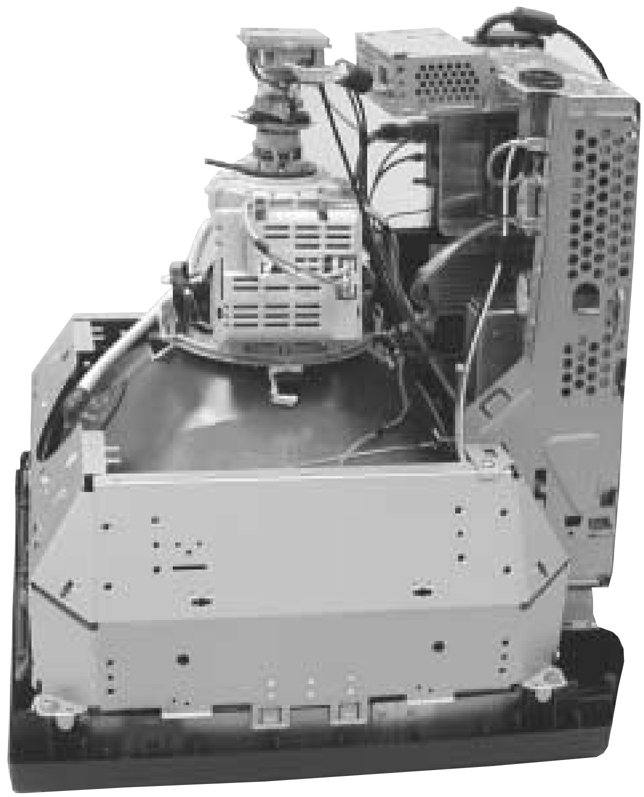




1. Remove (6) screws (+BVTP 3 x 8) from the sides of the EMI shield. Slide back and remove.
2. Gently wiggle the A board back and forth, and pull it to remove.
3. Remove (2) screws (+BVTP 3 x 8) from the rear of the chassis base and remove.
4. Remove (4) screws (+BVTP 4 x 16) from the chassis base and slide out to remove.
5. Remove (7) screws (+BVTP 3 x 8) from the D Board. Lift the board up and out to remove.

1-4. PICTURE TUBE REMOVAL

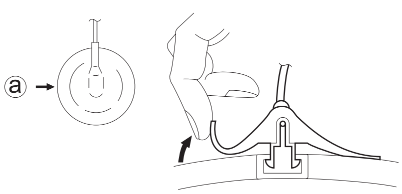
1. Place the unit face down on a cushion to avoid scratching.
2. Remove the anode cap.
3. Remove (4) screws (Screw (5) Tapping) from the CRT.
4. Remove the picture tube shield.
5. Remove the deflection yoke.
6. Remove the neck assembly.
7. Remove the A board and C Block.
8. Remove the demagnetization coil.
9. Remove (2) screws (BVTP 4 x 16) from the chassis assembly and slide out to remove.



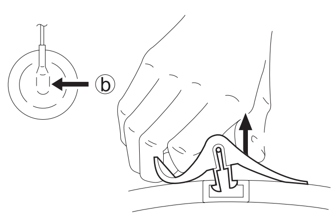
ANODE CAP REMOVAL

WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT before attempting to remove the anode cap. After removing the anode cap, short circuit to either the metal chassis, CRT shield, or carbon painted on the CRT.

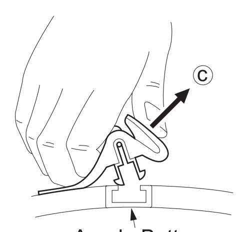
REMOVAL PROCEDURES



Turn up one side of the rubber cap inthe direction indicated by arrow ⓐ.



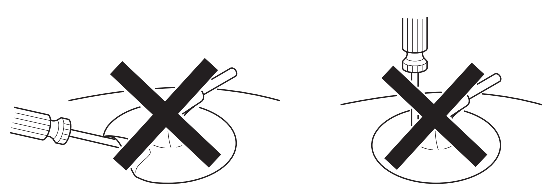
Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow ⓒ.

HOW TO HANDLE AN ANODE CAP

1. Do not use sharp objects which may cause damage to the surface of the anode cap.
2. To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminalis built into the rubber.
3. Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.



SECTION 2: SAFETY RELATED ADJUSTMENTS

When replacing parts shown in the table below, the following operational checks must be performed as a safety precaution against X-ray emissions from the unit.

	Part Replaced (⊠)
HV ADJ	RV901

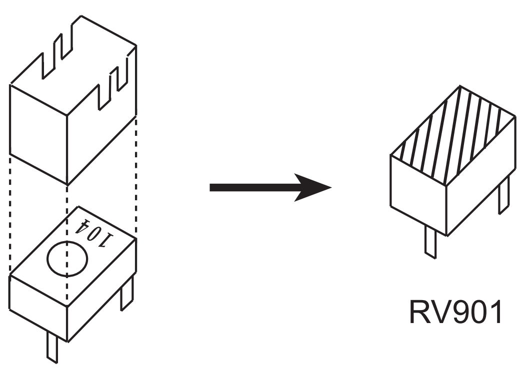
		Part Replaced (◪)
HV Regulator Circuit Check	**D board**	C909, IC501, R901, R902, R906, R910, R913, RV901 T901 (FBT) ● Mounted D Board
HV Protector Circuit Check	**D board**	C920, C923, D911, D912, R903, R917, R918, R919, R920, R923, T901 (FBT) ● Mounted D Board
	N board	IC1001, RB1001 ● Mounted N Board
Beam Current Protector Circuit Check	**D board**	C930, D917, R921, R932, R933, R935 T901 (FBT) ● Mounted D Board
	N board	IC1001, RB1001 ● Mounted N Board

※ Confirm one minute after turning on the power.

※ Allow the unit to warm up for one minute prior to checking the following conditions:

2-1. HV REGULATOR CHECK

1. Turn the RV901 slowly, and adjust so that high voltage is in in the specified range.
   [Specification]: 27.00 ± 0.20 kV
2. Check that the voltage of D912 cathode on the D Board is 17.0 V or more.



RV901

2-2. HV PROTECTOR CIRCUIT CHECK

1. Using external DC Power Supply, apply the voltage shown below between cathode of D912 and GND, and check that the RASTER disappears.
   [Specification]: 19.85 + 0.00/-0.05 V

2-3. BEAM PROTECTOR CHECK (SOFTWARE LOGIC)

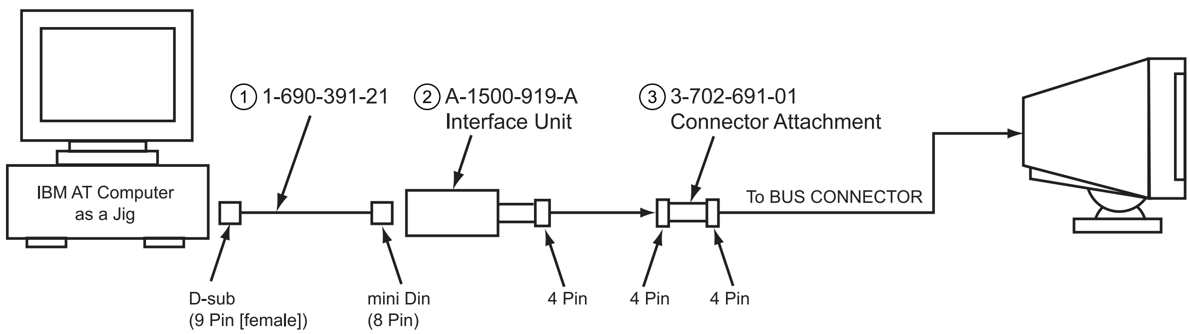
1. Connect constant current source to a section between T901 (FBT) ⑪ pin and GND, and check that the RASTER disappears when the specified current flows to the ⑪ pin.
   [Specification]: 1.92 + 0.00/-0.01 mA

2-4. B+ VOLTAGE CHECK

1. Input white cross hatch (fH = 69 kHz) signal.
2. CONT (max) & BRT (center).
3. Input voltage: 110 ± 10 VAC.
   Note: Use NF power supply or make sure that distortion factor is 3% or less.
4. Confirm that the voltage is within the range shown below:
   Standard voltage: 200 ± 3.0 VDC

SECTION 3: ADJUSTMENTS

Connect the communication cable of the connector located on the D board on the monitor. Run the service software and then follow the instructions



*The parts above (①~③) are necessary for DAS adjustment.

※ Allow a 30 minute warm-up period prior to making the following adjustments:

3-1. LANDING ROUGH ADJUSTMENT

1. Display all white pattern (or black dot pattern).
2. Set contrast to 255.
3. Display green plain pattern.
4. Slide the DY back and roughly adjust the green plain pattern to be centered on the useful screen with Purity Magnet.
5. Adjust DY tilt.

Note: Set ROTATION to 128 and LCC_NS to 128 when adjusting DY tilt.

6. Lightly tighten the DY screw.

3-2. LANDING FINE ADJUSTMENT

Note: (1) After adjust W/B (9300k), measure the average of ΣIK with all white video input, while CONTRAST is maximum and BRIGHTNESS is center. Adjustment shall be made so that the miss-landing become least after aging 2H with the IK 30% of measured value shown above.
(2) The magnetic field shall be BH = 0.
(3) When adjusting at other than BH = 0, calculate the shifted value from BH = 0.

1. Place the monitor in the Helmholtz coil.
2. Set as follows:
   LCC_SW = 0 (LCC Correction Current = 0)
   FUNCTION _SW bit 1 = (Auto Degauss = On)
   CONTRAST = 255
3. Display plain green pattern.
4. Degauss the iron part of chassis with a hand degausser and degauss coil.
5. Degauss CRT face with a hand degausser again.
6. Input AC 230V to AC IN and turn the monitor off and on. Then auto-degauss works.
7. Reset FUNCTION_SW bit 1 to 0 (auto-degauss = off).
8. Deguass CRT face with a hand degausser again.
9. Attach wobbling coil to the specified place on CRT neck.
10. With landing checker, adjust DY position, purity, DY center and landing of the 4 corners.
11. Check landing of the 4 corners, and adjust using magnet if they are not in the specification.

[Specifications]
Adjust so that the green is within the specification given right.
4 corner adjust target: within ± 1.

(μm)

0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3
0 ± 3	0 ± 7.5	0 ± 3

The red and blue must be within the specification given right with respect to the green.

(μm)

± 6	± 6	± 6
± 6	± 6	± 6
± 6	± 6	± 6

A difference between red and blue must be within the specification given right.

(μm)

10	10	10
10	7	10
10	10	10

Note: (1) Do not attach more than 2 magnets on one corner.
(2) Attach magnets within the range of 80 - 100 mm from DY.
(3) Be sure to degauss and check when used magnets.

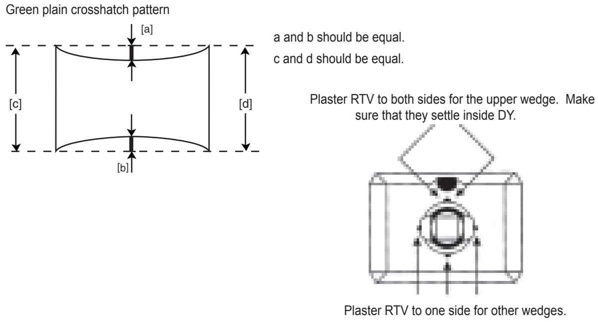
12. Tighten DY screw within specified torque, and auto-deguass.

Note: Torque 22 ± 2 dgcm (2.2 ± 0.2 Nm)

13. Adjust the vertical angle of DY to make top and bottom pins equal (a = b). The horizontal angle shall not be changed (straight). Settle DY upright without leaning, and insert wedges firmly so that DY shall not move.

[How to place wedge]

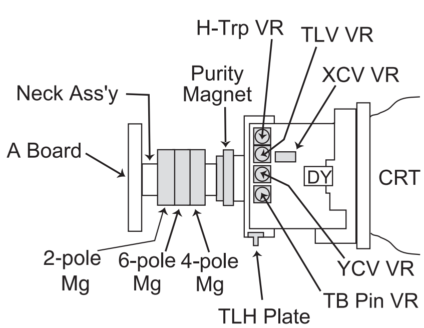
Green plain crosshatch pattern



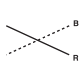
14. Adjust top and bottom pins correction VR.
15. Adjust the horizontal trapezoid distortion by DY horizontal trapezoid correction VR.
16. Check landing at each corner and in case not in specification, adjust landing of 4 corners with landing magnet.
17. Remove the sensor and wobbling coil.
18. Switch signals to R, G and B and then check that the pure colors have good color purity.
19. Fix purity magnets with white paint.

3-3. CONVERGENCE ROUGH ADJUSTMENT

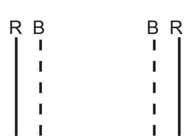
1. Display white crosshatch pattern.
2. Pile the convex parts of 6-pole magnet for convergence together.
3. Roughly adjust H. CONV and V. CONV with 4-pole magnet.



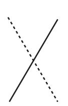
XCV Movement



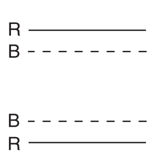
TLH Movement



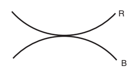
YCH Movement



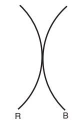
TLV Movement



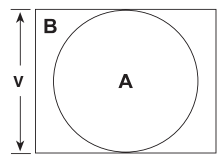
XBV Movement



YBH Movement



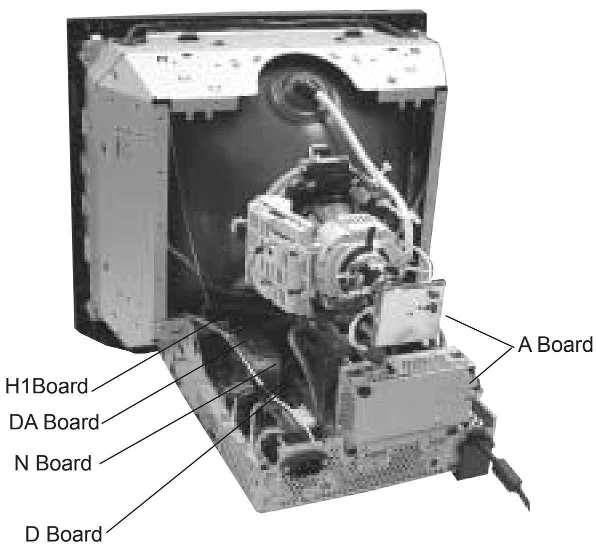
3-4. CONVERGENCE SPECIFICATION



A	0.20 mm
B	0.24 mm

SECTION 4: DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION



4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS INFORMATION

All capacitors are in µF unless otherwise noted. pF : µµF 50WV or less are not indicated except for electrolytics and tantalums.

All electrolytics are in 50V unless otherwise specified.

All resistors are in ohms. KΩ=1000Ω, MΩ=1000kΩ

Indication of resistance, which does not have one for rating electrical power, is as follows: Pitch : 5mm
Rating electrical power : $^1/_4$ W

$^1/_4$ W in resistance, $^1/_{10}$ W and $^1/_8$ W in chip resistance.

: nonflammable resistor.

: fusible resistor.

Δ : internal component.

: panel designation and adjustment for repair.

All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

Readings are taken with a color-bar signal input.

Readings are taken with a 10MΩ digital multimeter.

Voltages are DC with respect to ground unless otherwise noted.

Voltage variations may be noted due to normal production tolerances.

All voltages are in V.

S : Measurement impossibillity.

: B+line.

: B-line. (Actual measured value may be different).

: signal path. (RF)

Circled numbers are waveform references.

The components identified by shading and ⚠ symbol are critical for safety. Replace only with part number specified.

The symbol indicates a fast operating fuse and is displayed on the component side of the board. Replace only with fuse of the same rating as marked.

Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Le symbole indique une fusible a action rapide. Doit etre remplace par une fusible de meme yaleur, comme maque.

The components identified by in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be necessary, replace only with the value originally used.

When replacing components identified by , make the necessary adjustments as indicated. If the results do not meet the specified value, change the component identified by and repeat the adjustment until the specified value is achieved.

When replacing the parts listed in the table below, it is important to perform the related adjustments.

	Part Replaced ( )
HV ADJ	RV901

	Part Replaced ( )
HV Regulator Circuit Check	**D board** C909, IC501, R901, R902, R906, R910, R913, RV901 T901 (FBT) ● Mounted D Board
HV Protector Circuit Check	**D board** C920, C923, D911, D912, R903, R917, R918, R919, R920, R923, T901 (FBT) ● Mounted D Board **N board** IC1001, RB1001 ● Mounted N Board
Beam Current Protector Circuit Check	**D board** C930, D917, R921, R932, R933, R935 T901 (FBT) ● Mounted D Board **N board** IC1001, RB1001 ● Mounted N Board

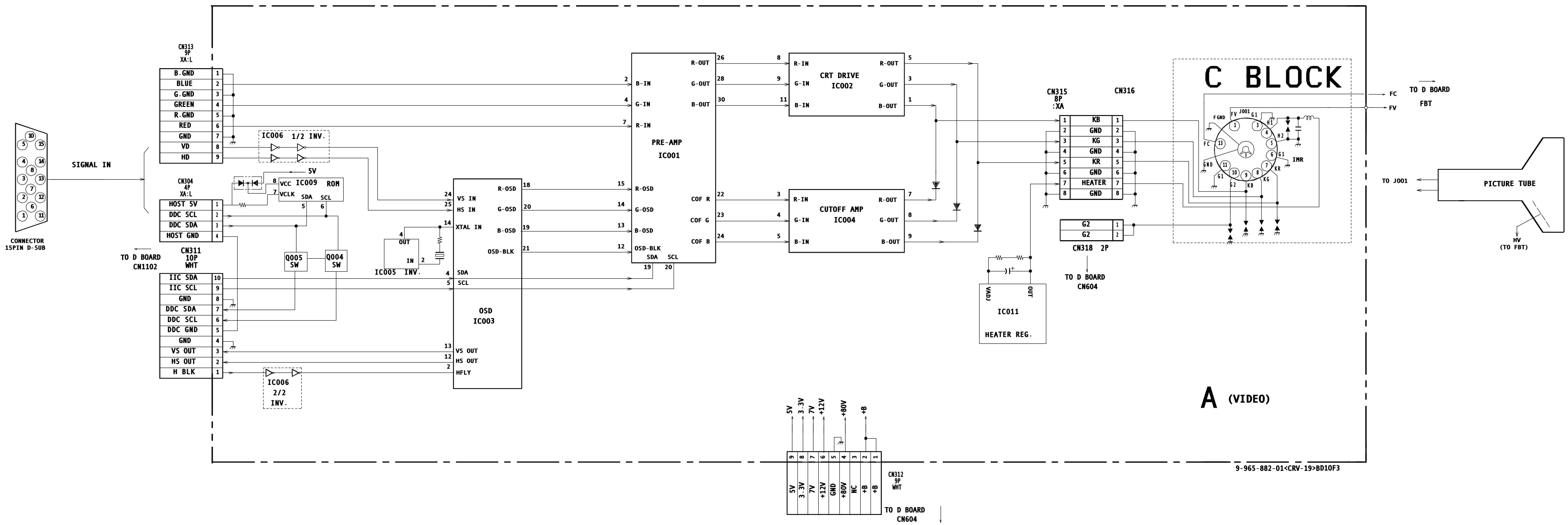
REFERENCE INFORMATION

RESISTOR
- **: RN** METAL FILM
- **: RC** SOLID
- **: FPRD** NONFLAMMABLE CARBON
- **: FUSE** NONFLAMMABLE FUSIBLE
- **: RW** NONFLAMMABLE WIREWOUND
- **: RS** NONFLAMMABLE METAL OXIDE
- **: RB** NONFLAMMABLE CEMENT
- **: ※** ADJUSTMENT RESISTOR

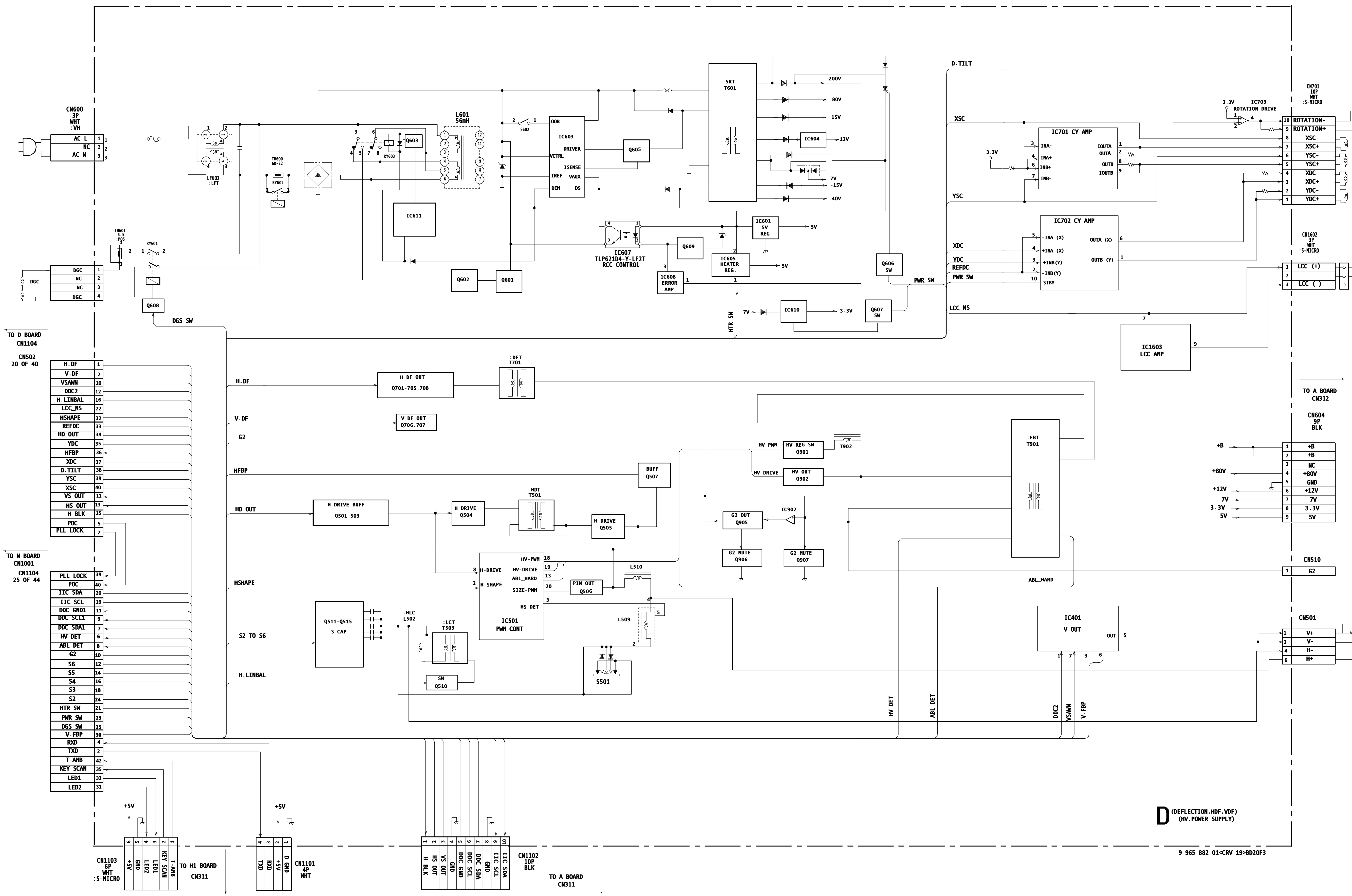
COIL
- **: LF-8L** MICRO INDUCTOR

CAPACITOR
- **: TA** TANTALUM
- **: PS** STYROL
- **: PP** POLYPROPYLENE
- **: PT** MYLAR
- **: MPS** METALIZED POLYESTER
- **: MPP** METALIZED POLYPROPYLENE
- **: ALB** BIPOLAR
- **: ALT** HIGH TEMPERATURE
- **: ALR** HIGH RIPPLE

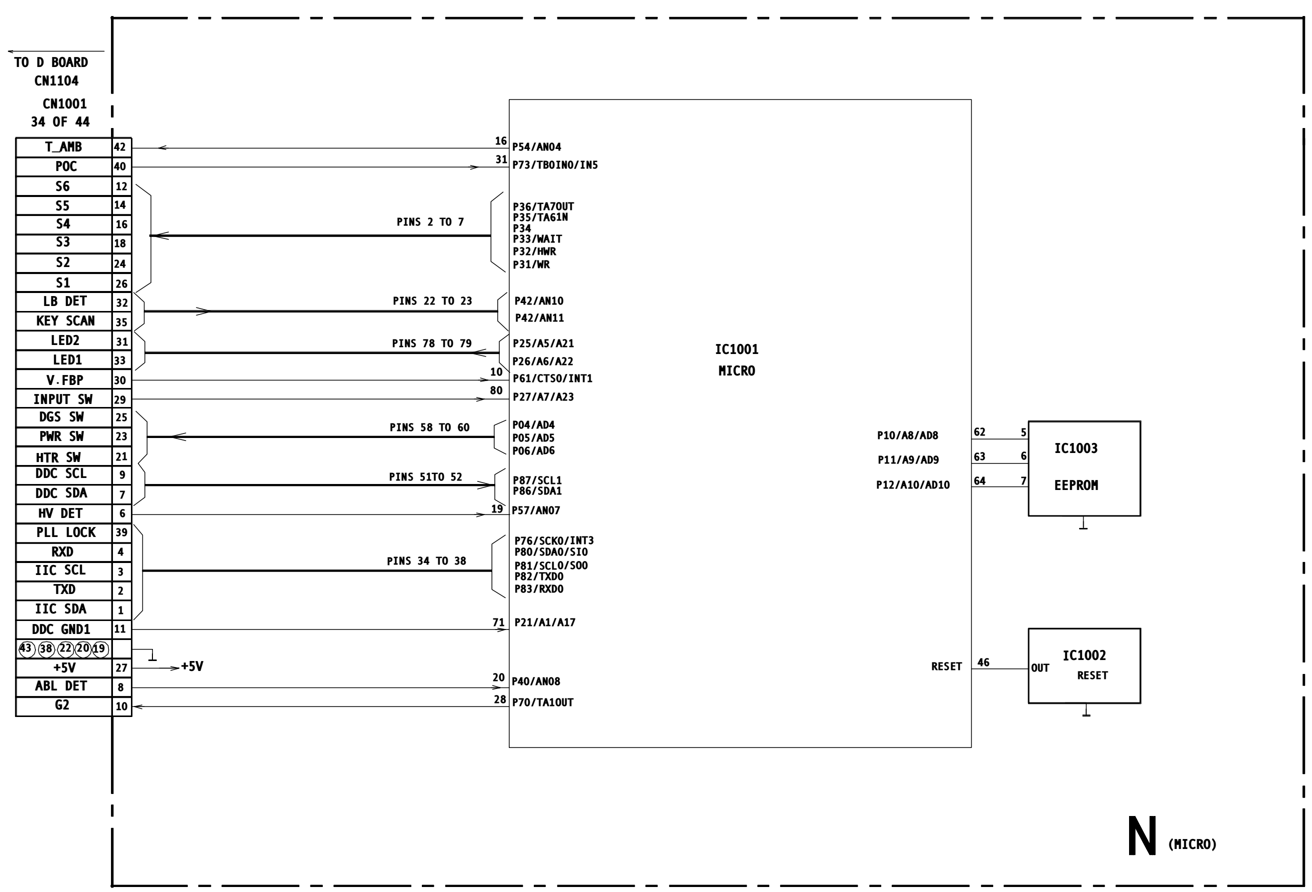
4-3. DIAGRAMS BLOCK DIAGRAM (1/3)

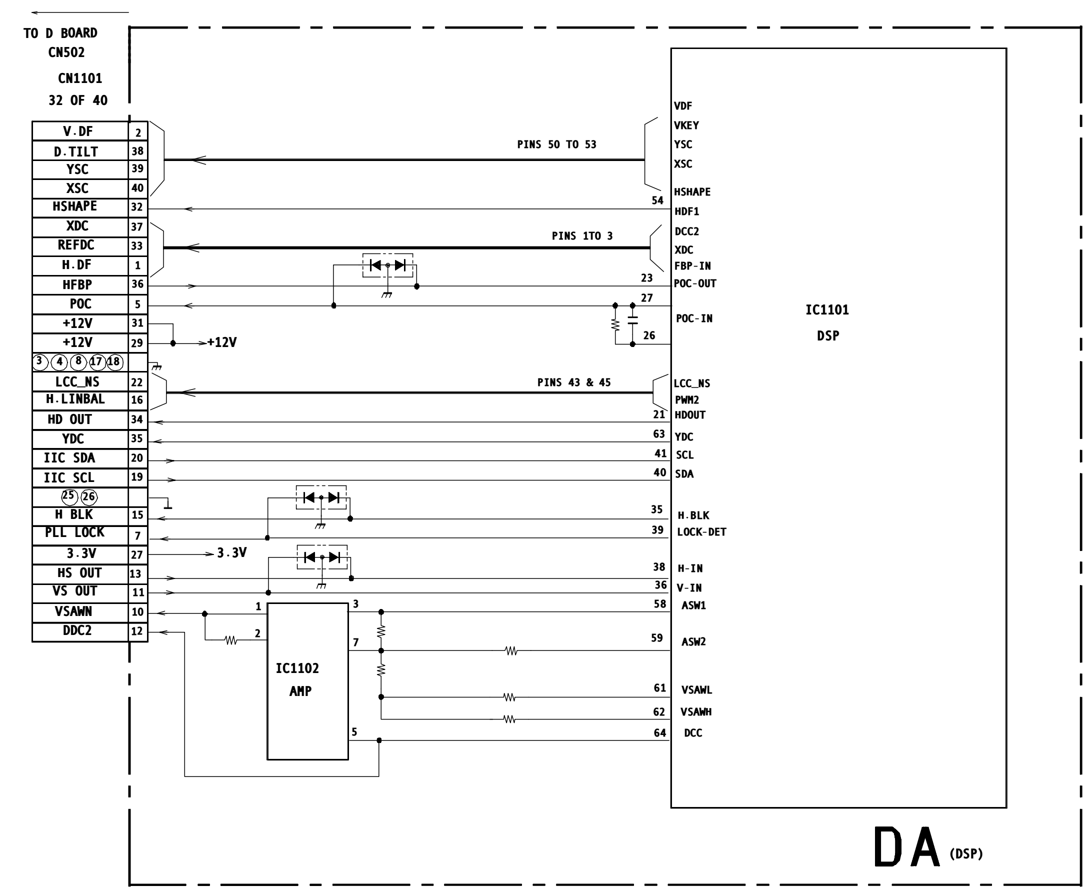


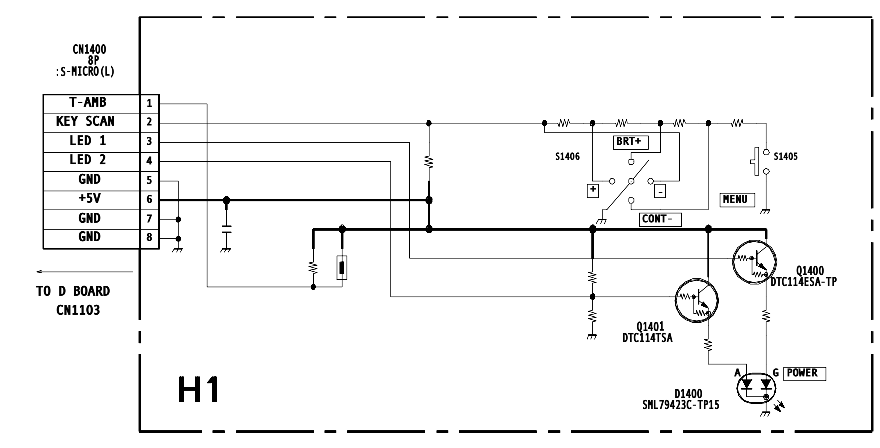
BLOCK DIAGRAM (2/3)



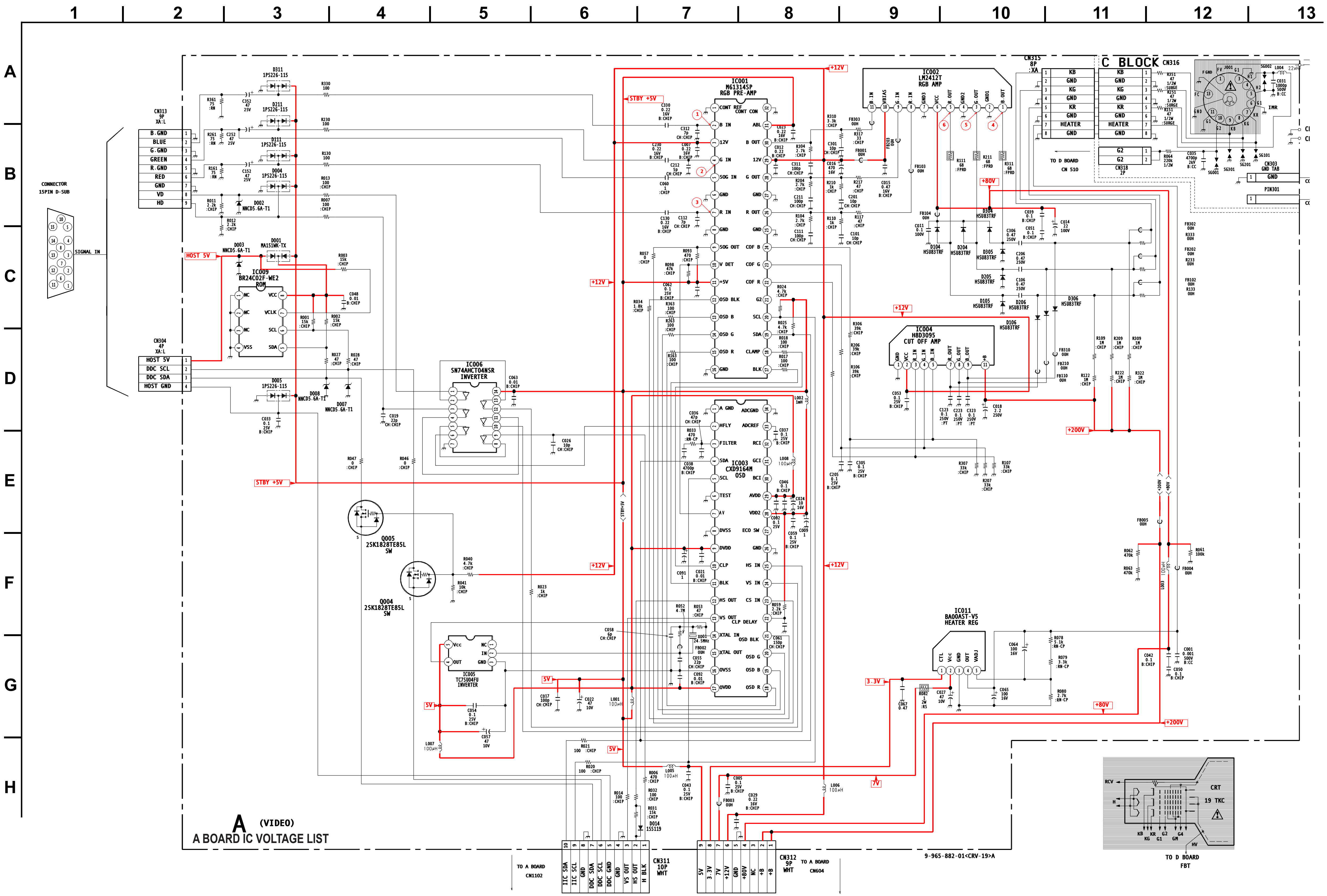
BLOCK DIAGRAM (3/3)







A BOARD SCHEMATIC DIAGRAM



A BOARD IC VOLTAGE LIST

IC001

pin	volt
1	GND
2	3.6
3	12.0
4	3.6
5	2.3
6	GND
7	3.6
8	GND
9	0.6
10	4.4
11	5
12	0
13	0
14	0
15	0
16	GND
17	0.8
18	0.1
19	4.7
20	4.5
21	NC
22	3.2
23	3.3
24	3
25	GND
26	2.6
27	GND
28	2.6
29	12
30	2.6
31	5
32	GND

IC002

pin	volt
1	56.6
2	GND
3	56.3
4	GND
5	54.4
6	79.4
7	GND
8	2.1
9	2.0
10	11.9
11	2

IC003

pin	volt
1	GND
2	0.4
3	2.2
4	4.7
5	4.5
6	GND
7	4.4
8	GND
9	5.0
10	0.1
11	0.8
12	0.3
13	0
14	2.1
15	NC
16	GND
17	5
18	0
19	0
20	0
21	0
22	4.3
23	0.6
24	4.2
25	0.5
26	GND
27	NC
28	5
29	5
30	NC
31	NC
32	NC
33	3.4
34	GND

IC004

pin	volt
1	GND
2	11.8
3	4.9
4	4.9
5	4.9
6	NC
7	105.4
8	109.4
9	112.9
10	NC
11	199.6

IC005

pin	volt
1	NC
2	2.3
3	GND
4	2.1
5	5.0

IC006

pin	volt
1	0.3
2	4.5
3	0.0
4	4.9
5	4.6
6	0.3
7	GND
8	4.6
9	0.2
10	0.0
11	4.9
12	0.4
13	4.5
14	5.0

IC009

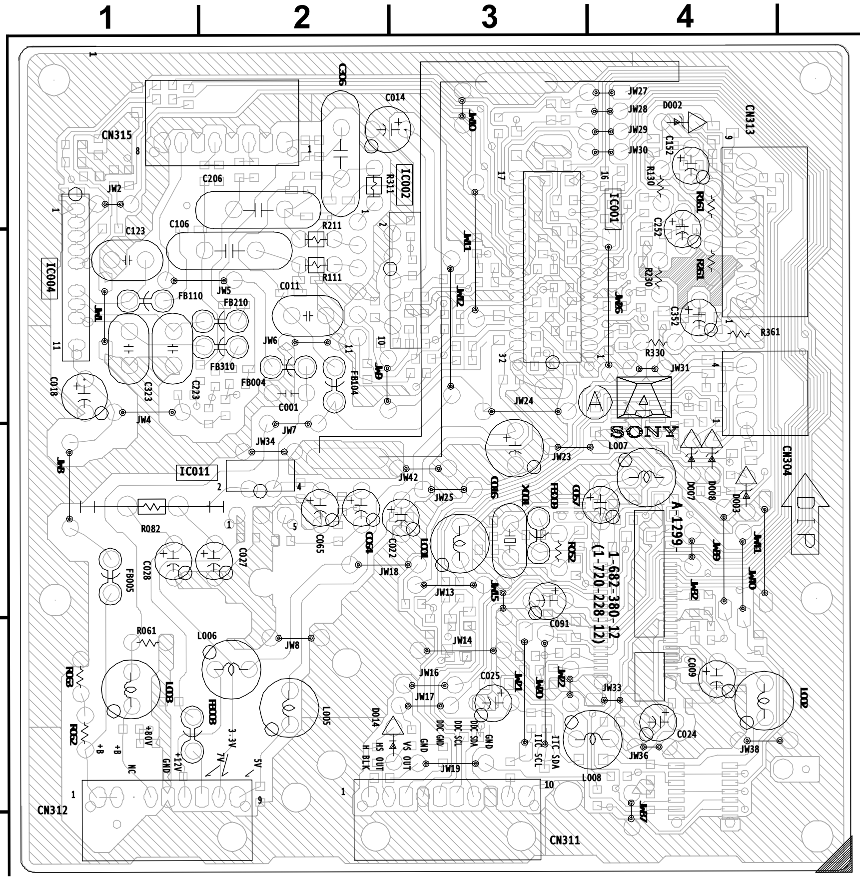
pin	volt
1	GND
2	GND
3	GND
4	GND
5	4.2
6	4.2
7	0.0
8	5.0

IC011

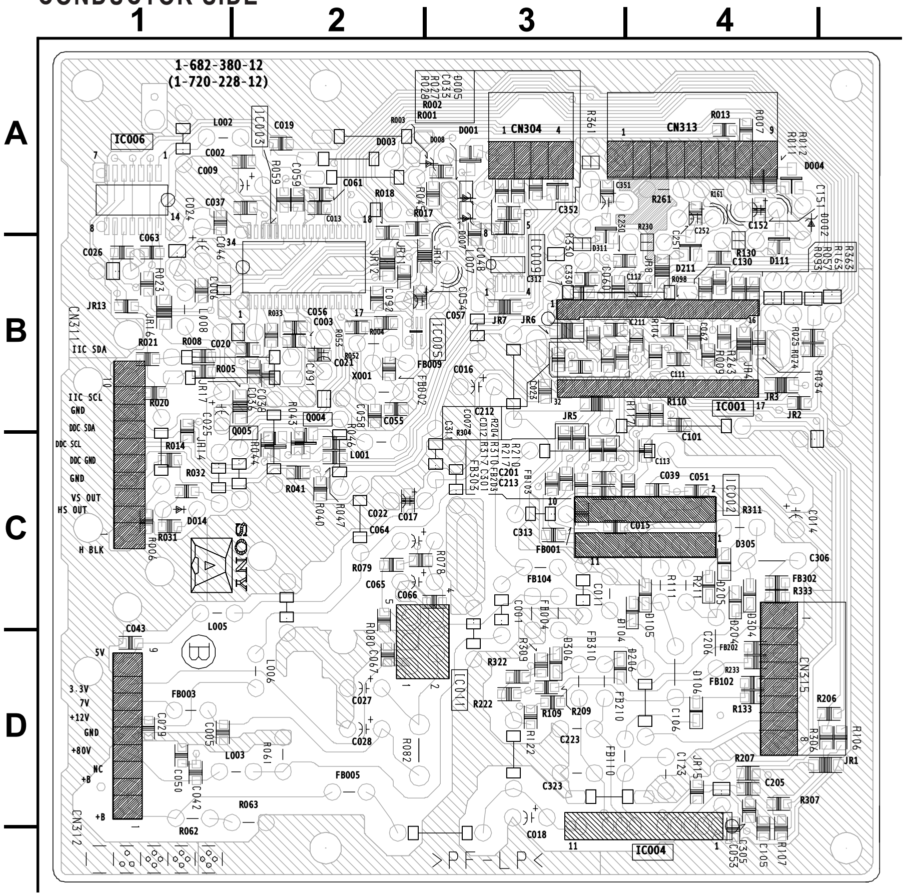
pin	volt
1	3.3
2	7.0
3	GND
4	4.9
5	1.2

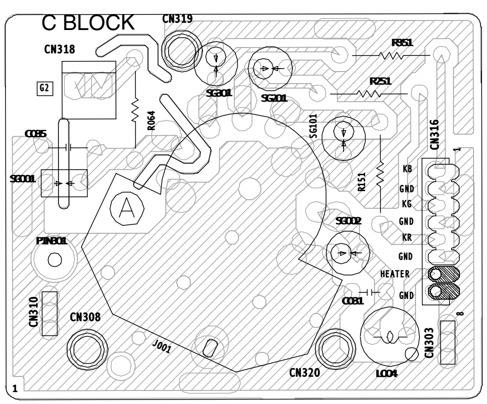
All voltages are in V

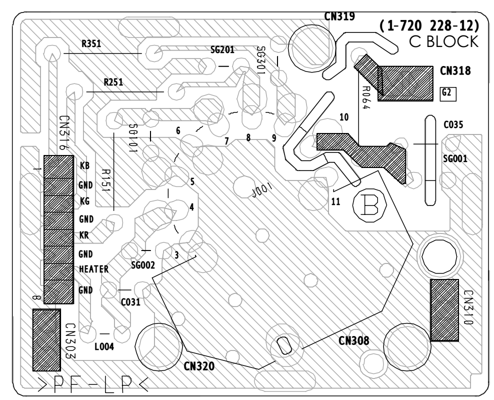
COMPONENT SIDE



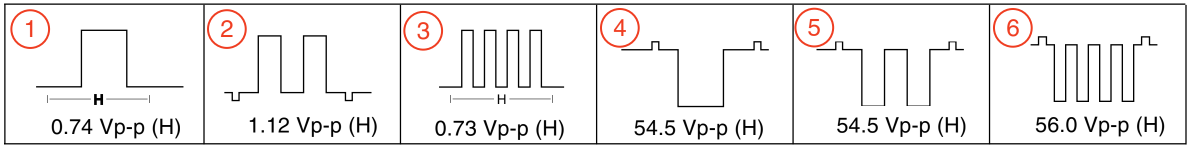
CONDUCTOR SIDE







• **A BOARD WAVEFORMS**



A BOARD LOCATOR LIST

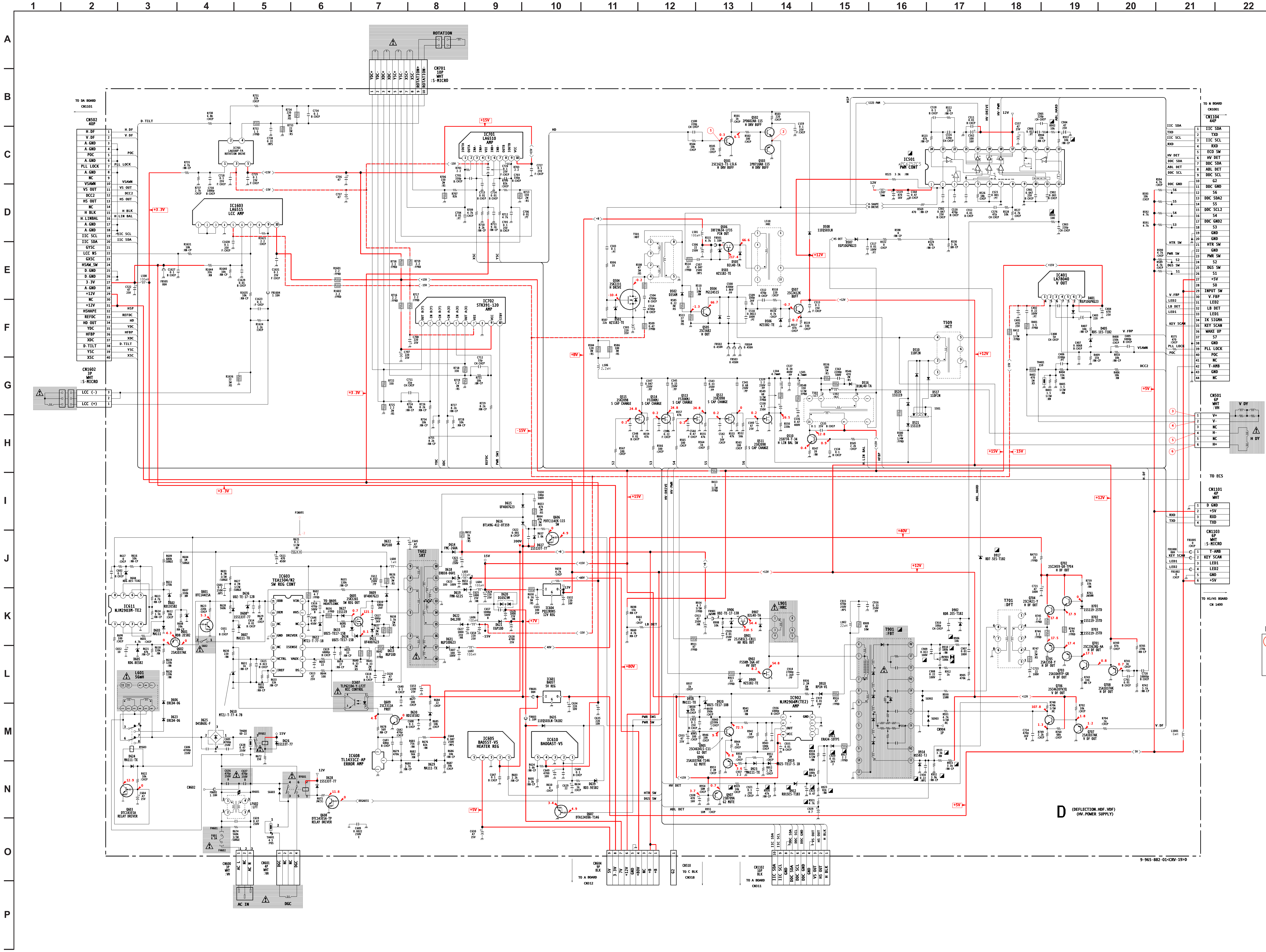
DIODE		
	COMP	COND
D001	--	A-3
D002	A-4	--
D003	C-4	--
D004	--	A-5
D005	--	B-3
D007	C-4	--
D008	C-4	--
D014	--	C-1
D104	--	D-4
D105	--	D-4
D106	--	D-4
D111	--	B-4
D204	--	D-4
D205	--	C-4
D206	--	D-4
D211	--	B-4
D304	--	D-4
D305	--	C-4
D306	--	D-3
D311	--	B-3

IC		
	COMP	COND
IC001	B-3	--
IC002	B-3	--
IC003	--	B-2
IC004	B-1	--
IC005	--	B-3
IC006	--	A-1
IC009	--	B-3
IC011	C-2	--

TRANSISTOR		
	COMP	COND
Q004	--	C-2
Q005	--	C-2

CRYSTAL		
	COMP	COND
X001	C-3	--

D BOARD SCHEMATIC DIAGRAM



D BOARD IC VOLTAGE LIST

IC401

pin	volt
1	1.6
2	14.3
3	-13.3
4	-14.4
5	0.3
6	13.8
7	1.6

IC501

pin	volt
1	12.1
2	4.7
3	4
4	6.3
5	8.8
6	6.2
7	GND
8	0.2
9	GND
10	8.4
11	4.6
12	5.8
13	5.8
14	5.8
15	7.1
16	11.6
17	12.1
18	8.8
19	9.4
20	8.2
21	0
22	4.7
23	4
24	4

IC601

pin	volt
1	5.9
2	5.9
3	GND

IC603

pin	volt
1	148.1
2	0.6
3	NC
4	2.9
5	0.0
6	12.6
7	12.3
8	2.5
9	2.8
10	NC
11	GND
12	NC
13	0.5
14	5.4

IC604

pin	volt
1	15.0
2	GND
3	12.0

IC605

pin	volt
1	4.7
2	5.9
3	GND
4	5.0
5	NC

IC607

pin	volt
1	5.6
2	4.6
3	3.4
4	12.7

IC608

pin	volt
1	3.1
2	GND
3	2.5

IC610

pin	volt
1	3.4
2	6.2
3	GND
4	3.3
5	1.2

IC611

pin	volt
1	0.0
2	1.2
3	0.5
4	GND
5	5.0
6	3.2
7	1.2
8	12.9

IC701

pin	volt
1	1.5
2	1.5
3	1.5
4	1.5
5	-15.0
6	1.5
7	1.5
8	0.2
9	0.2
10	15.0

IC702

pin	volt
1	0.0
2	0.8
3	0.8
4	0.8
5	0.8
6	-0.1
7	-15.0
8	GND
9	15.0
10	4.8

IC703

pin	volt
1	1.2
2	1.2
3	-15.0
4	0.2
5	15.0

IC902

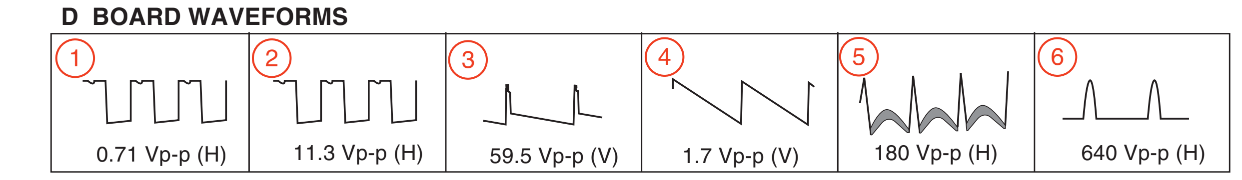
pin	volt
1	NC
2	NC
3	GND
4	GND
5	3.8
6	3.8
7	8.6
8	15

IC1603

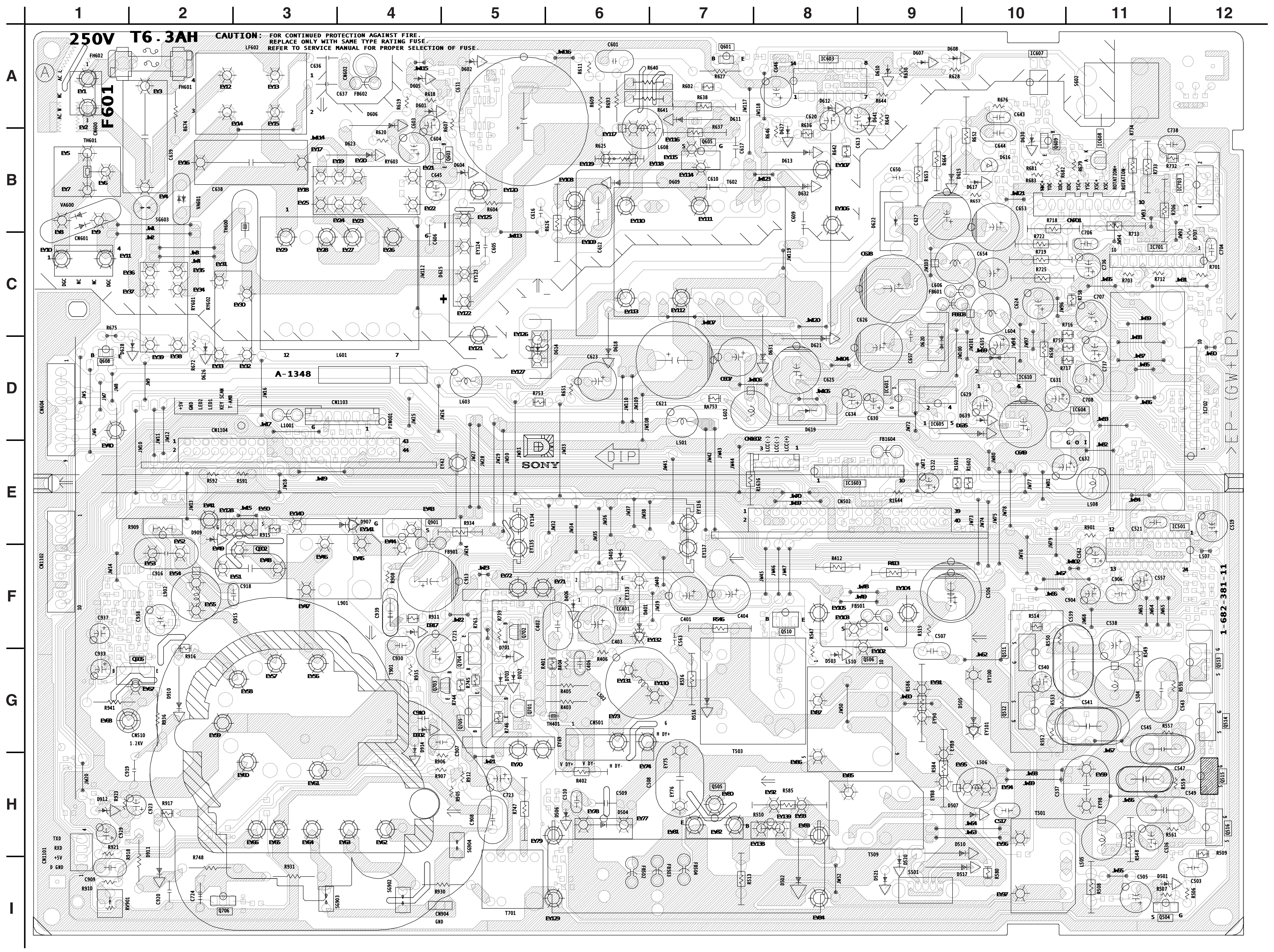
pin	volt
1	NC
2	NC
3	NC
4	GND
5	-14.8
6	0.7
7	0.8
8	-4.3
9	-4.3
10	15.0

All voltages are in V

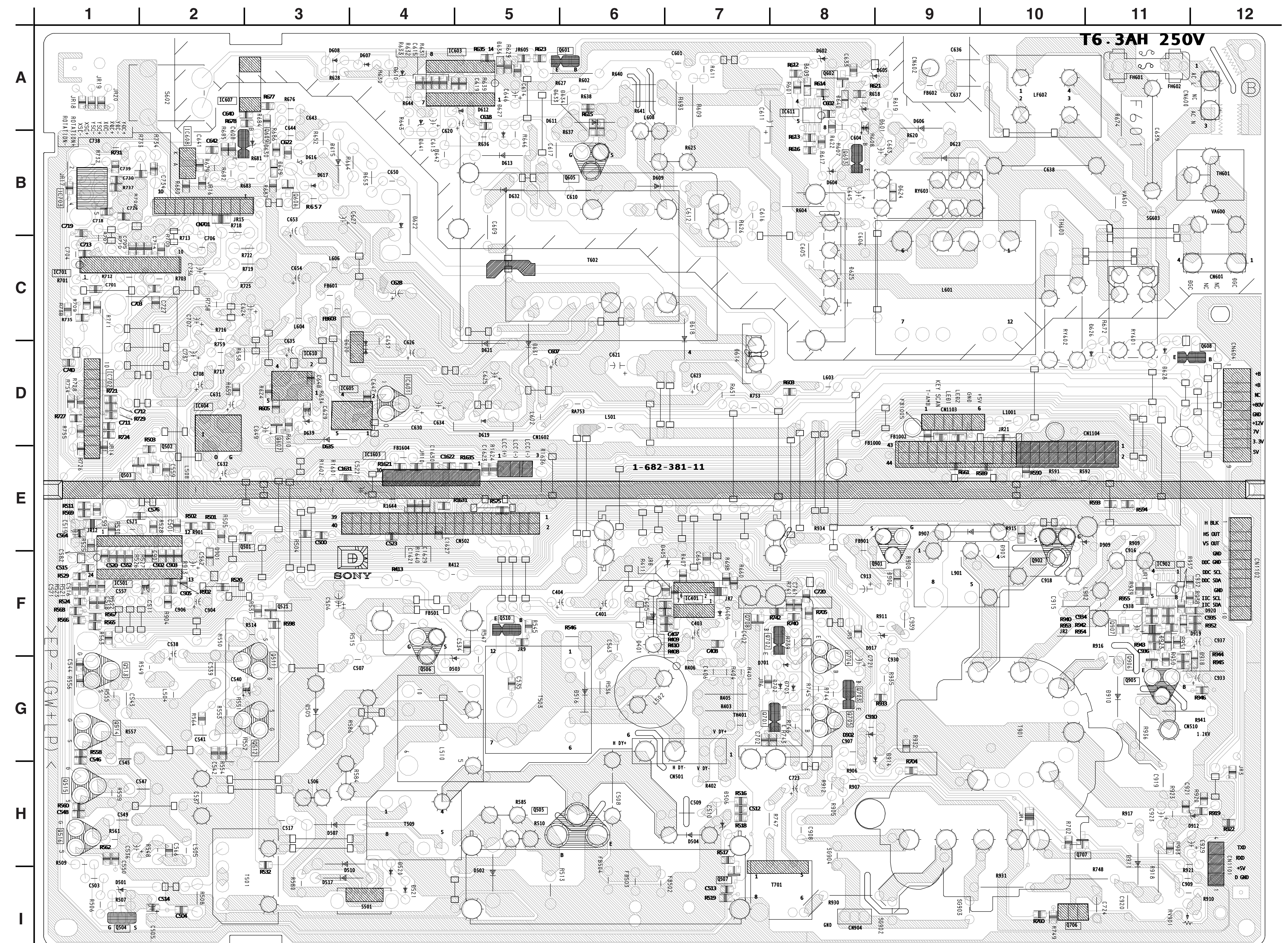
D BOARD WAVEFORMS



COMPONENT SIDE



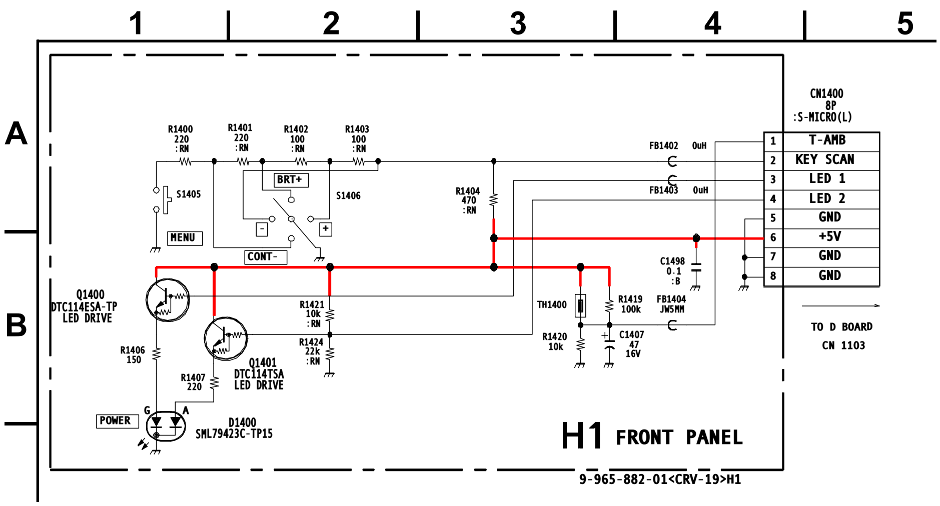
CONDUCTOR SIDE



D BOARD LOCATOR LIST

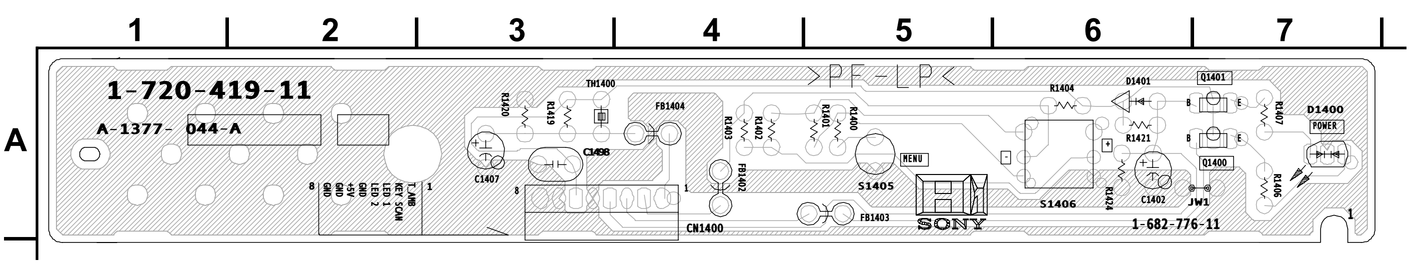
DIODE			DIODE			TRANSISTOR		
	COMP	COND		COMP	COND		COMP	COND
D401	F-6	--	D630	B-10	--	Q501	--	E-2
D405	F-6	--	D631	D-8	--	Q502	--	E-2
D501	I-11	--	D632	B-8	--	Q503	--	E-1
D502	I-8	--	D633	--	A-5	Q504	--	I-1
D503	G-8	--	D634	--	A-5	Q505	--	H-5
D504	H-6	--	D635	D-10	--	Q506	--	F-4
D505	G-9	--	D636	--	A-5	Q507	--	H-7
D506	H-5	--	D639	D-10	--	Q510	--	F-5
D507	H-9	--	D701	F-5	--	Q511	F-10	--
D510	H-9	--	D702	F-5	--	Q512	G-10	--
D516	G-7	--	D703	F-5	--	Q513	G-12	--
D517	I-9	--	D902	G-4	--	Q514	G-12	--
D520	H-9	--	D906	--	F-9	Q515	H-12	--
D521	H-9	--	D907	E-4	--	Q601	A-7	--
D601	A-4	--	D909	E-2	--	Q602	--	A-8
D602	A-5	--	D910	G-2	--	Q603	B-5	--
D603	--	A-8	D911	H-2	--	Q605	B-7	--
D605	A-4	--	D912	H-1	--	Q607	--	D-3
D606	A-4	--	D914	G-4	--	Q608	D-1	--
D608	A-9	--	D917	F-4	--	Q609	B-10	--
D609	B-7	--	D918	--	F-12	Q701	G-5	--
D610	A-9	--	D919	--	F-12	Q702	F-5	--
D611	B-7	--	D920	--	F-12	Q703	G-5	--
D612	A-8	--	D923	--	F-11	Q704	G-5	--
D613	B-8	--	IC			Q705	G-5	--
D614	D-5	--		COMP	COND	Q706	I-2	--
D615	B-9	--	IC401	F-6	--	Q707	--	H-10
D616	B-10	--	IC501	E-11	--	Q708	--	F-7
D617	B-10	--	IC601	D-9	--	Q901	--	E-9
D618	D-6	--	IC603	A-8	--	Q902	--	E-10
D619	D-8	--	IC604	D-10	--	Q905	--	G-11
D620	D-9	--	IC605	D-9	--	Q906	--	F-11
D621	D-8	--	IC607	--	A-2	Q907	--	F-11
D622	C-9	--	IC608	B-11	--			
D623	B-4	--	IC610	D-10	--			
D624	--	B-9	IC611	--	A-8			
D625	C-5	--	IC701	C-11	--			
D626	D-2	--	IC702	D-12	--			
D627	B-8	--	IC703	B-12	--			
D628	D-2	--	IC902	--	F-11			
D629	--	B-3	IC1603	--	E-4			

H1 BOARD SCHEMATIC DIAGRAM

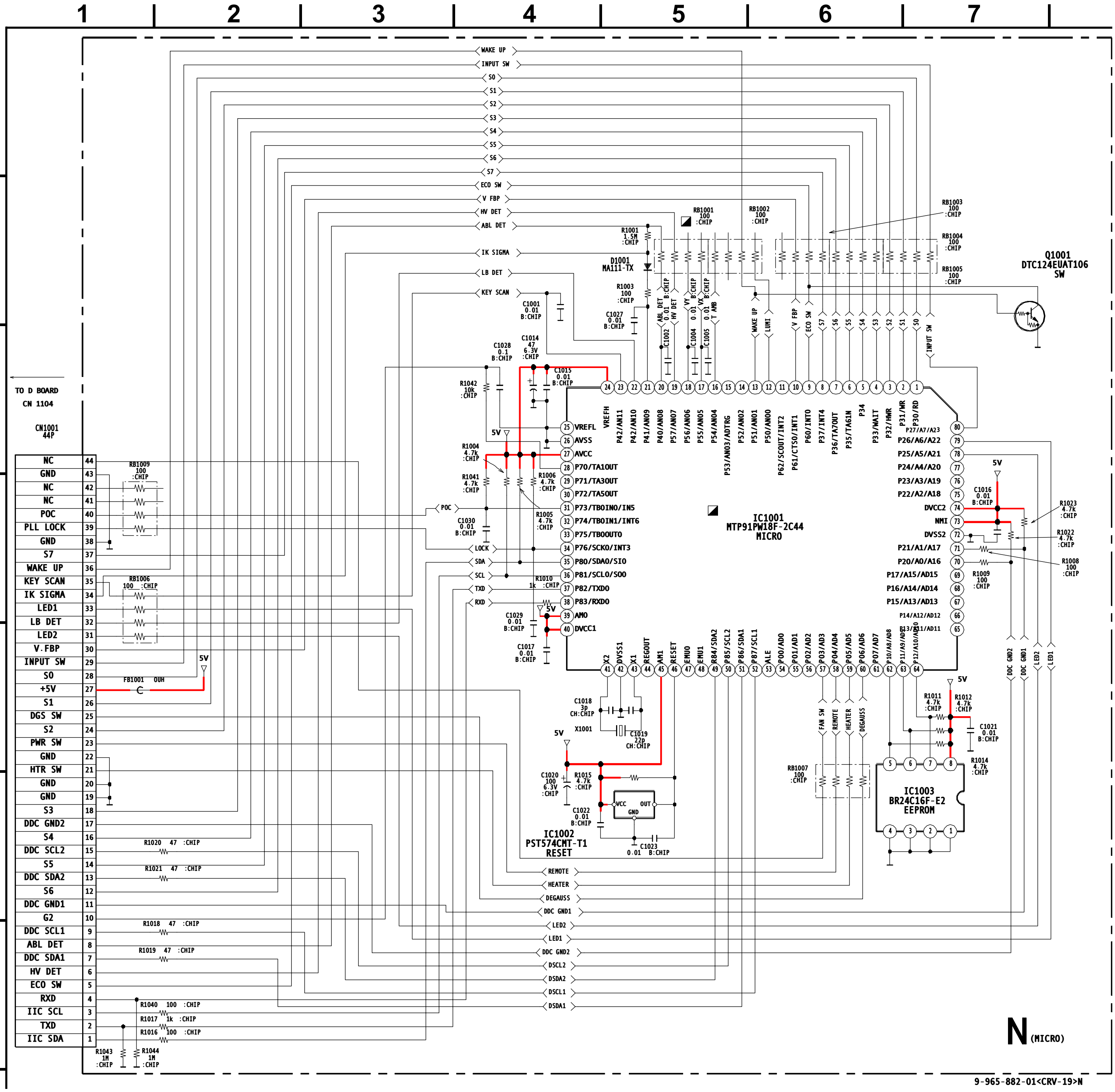


H1

[FRONT PANEL]

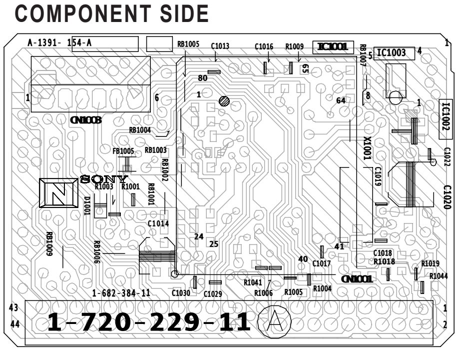


N BOARD SCHEMATIC DIAGRAM

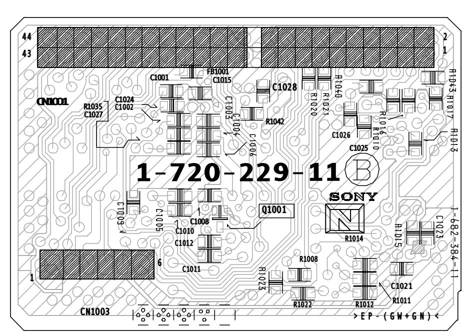


N [MICRO]

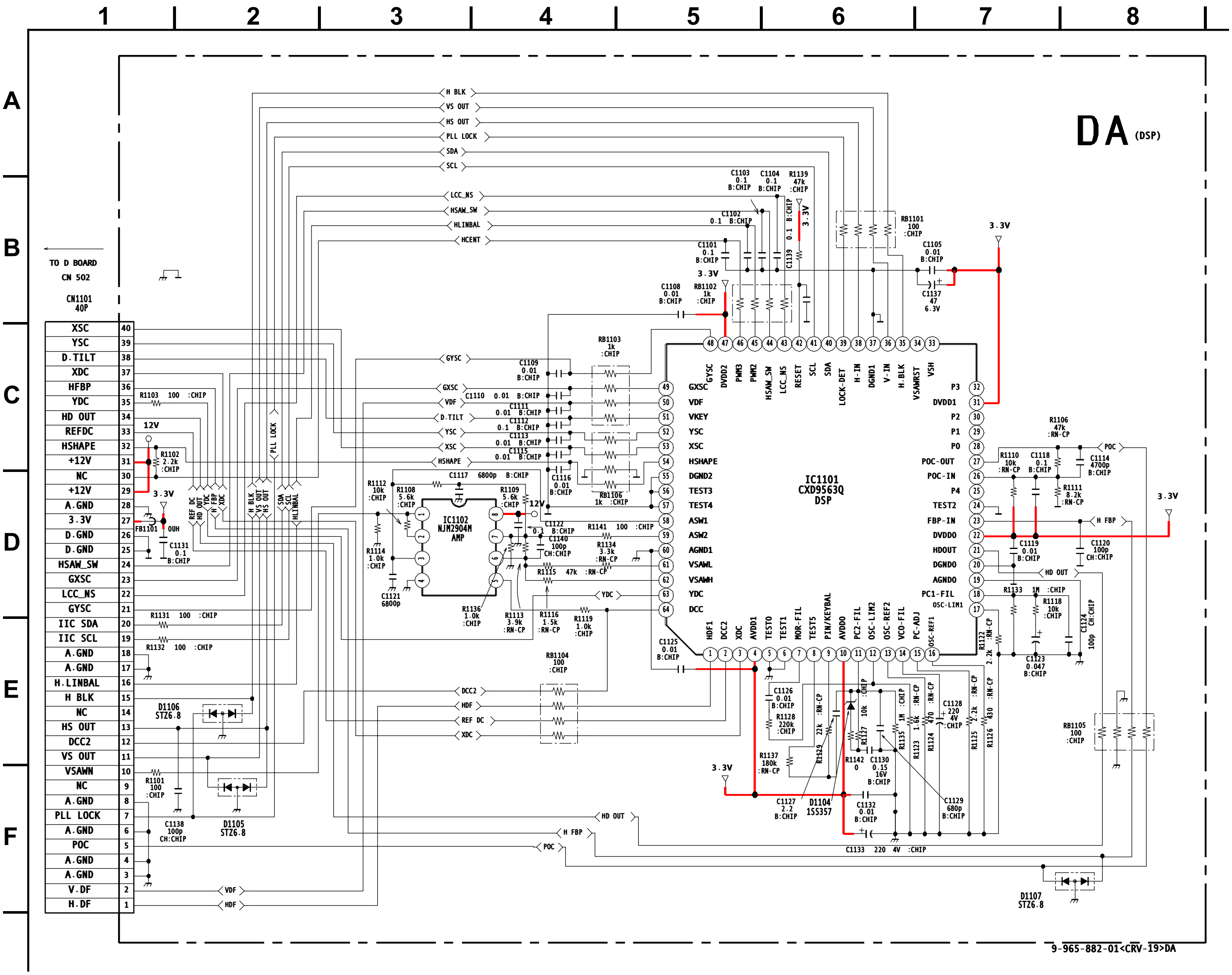
COMPONENT SIDE



CONDUCTOR SIDE

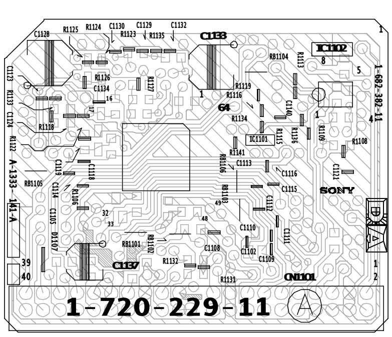


DA BOARD SCHEMATIC DIAGRAM

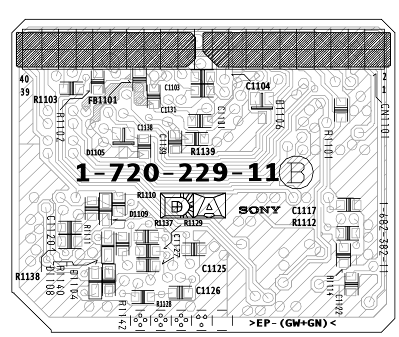


DA [DSP]

COMPONENT SIDE

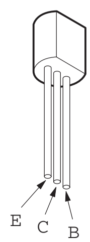


CONDUCTOR SIDE

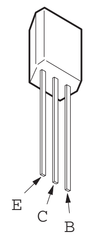


4-4. SEMICONDUCTORS

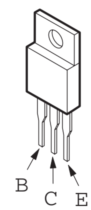
2SC2610



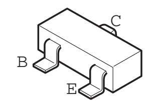
DTC143ESA



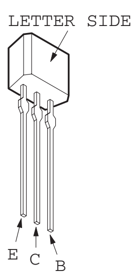
2SC4634LS-CB11



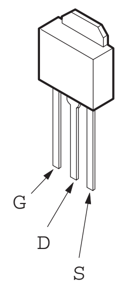
2SC1623-L5L6
2SA1037AK-T146-R
2SC3941A-Q(TA)
DTA114EKA-T146



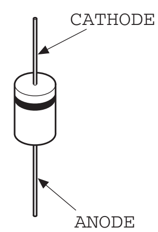
2SA1175-HFE
2SC2785-HFE
DTC114TSA
2SC3311A-QRSTA



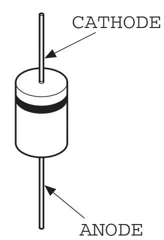
2SK2605LBSONY
2SK3155-01
2SK2098-01MR-F119
2SK2843LBS2SONY
IRFU110A



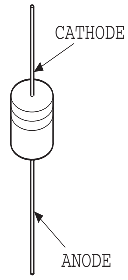
MTZJ-T-77-12B
ERC81-004
EGP10D
RGP10JPKG23
RGP10DG23
RL3Z-LF014-302



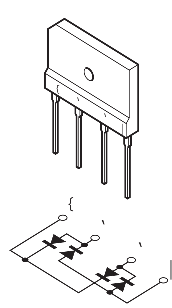
HZU5.6B2TRF
D1NS6
D1NL40-TA2
UF4007G23
RGP02-20EL-6394
ERB91-02



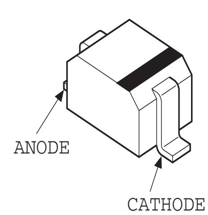
1SS119-25
RD5.1ESB2
RD5.6ESB2
RD18ESB2
RD10ESB2
MTZJ-4.7C
MTZJ-T-77-18
RB441Q-40T-77



D4SB60L



HSS83TD
1SS355TE-17
HSS82



SECTION 5: EXPLODED VIEWS

Components not identified by a part number or description are not stocked because they are seldom required for routine service.

The component parts of an assembly are indicated by the reference numbers in the far right column of the parts list and within the dotted lines of the diagram.

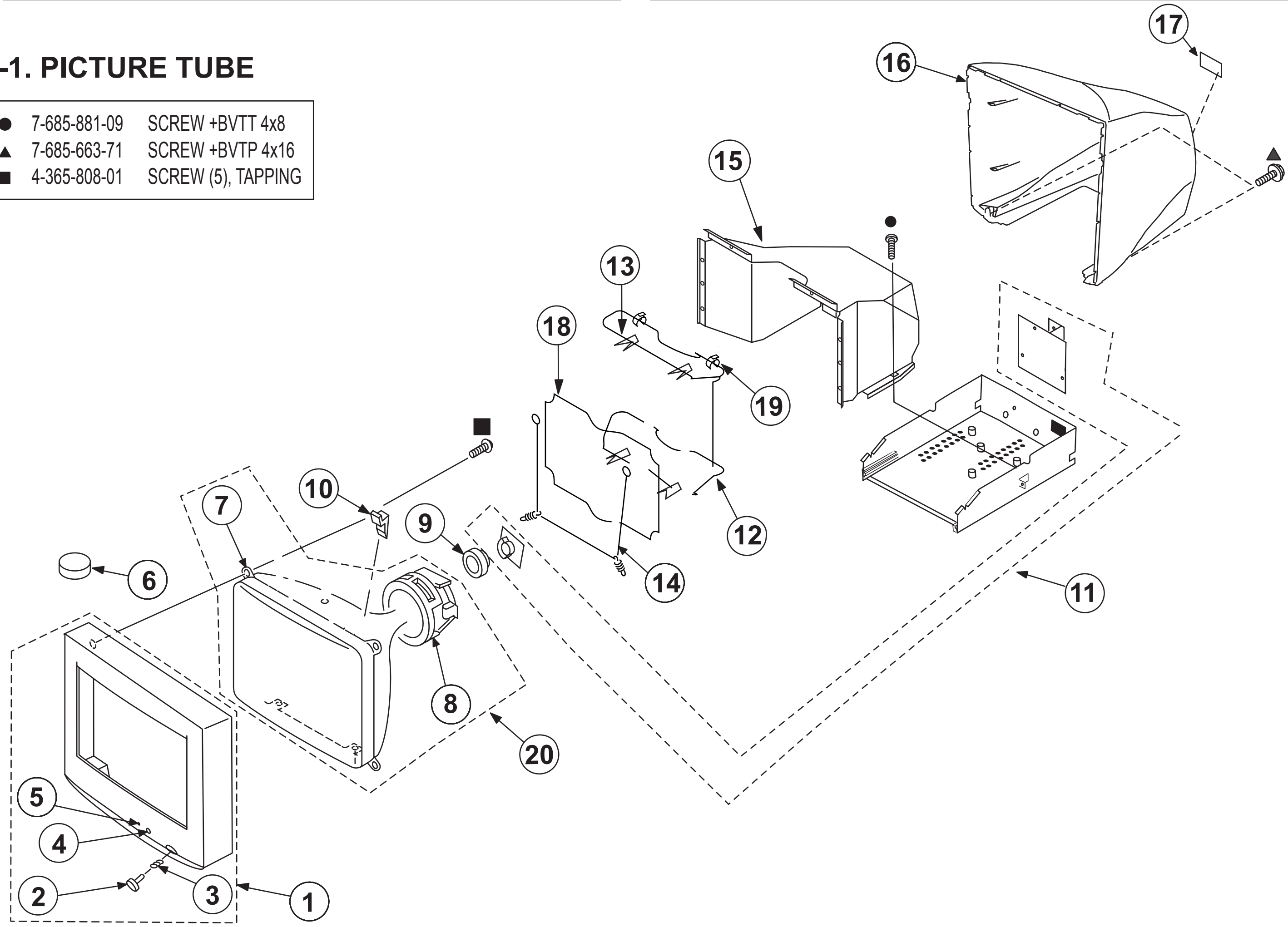
*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-1. PICTURE TUBE

●	7-685-881-09	SCREW +BVTT 4x8
▲	7-685-663-71	SCREW +BVTP 4x16
■	4-365-808-01	SCREW (5), TAPPING



	REF.NO.	PART NO.	DESCRIPTION	[Assembly Includes]
	1	X-4039-350-1	BEZEL ASSY	2-5
	1	X-4039-570-1	BEZEL ASSY (VAIO COLOR)	2-5
	2	4-080-251-02	BUTTON, POWER	
	2	4-080-251-11	BUTTON, POWER (VAIO COLOR)	
	3	4-042-593-11	SPRING, COMPRESSION	
*	4	4-081-488-01	JOYSTICK	
*	4	4-081-488-21	JOYSTICK (VAIO COLOR)	
	5	4-080-487-01	BUTTON, MENU	
	5	4-080-487-21	BUTTON, MENU (VAIO COLOR)	
	6	1-452-032-00	MAGNET,DISC	
⚠	7	8-736-413-05	CRT 19TKC (W-ARAS) (M46LRR15X)	
⚠	8	8-451-518-11	DY Y19TKL-M	
⚠	9	1-452-923-51	NECK ASSEMBLY (NA-2915)	
	10	4-040-897-01	SPACER, DY	
*	11	A-1299-559-A	A BOARD, COMPLETE	

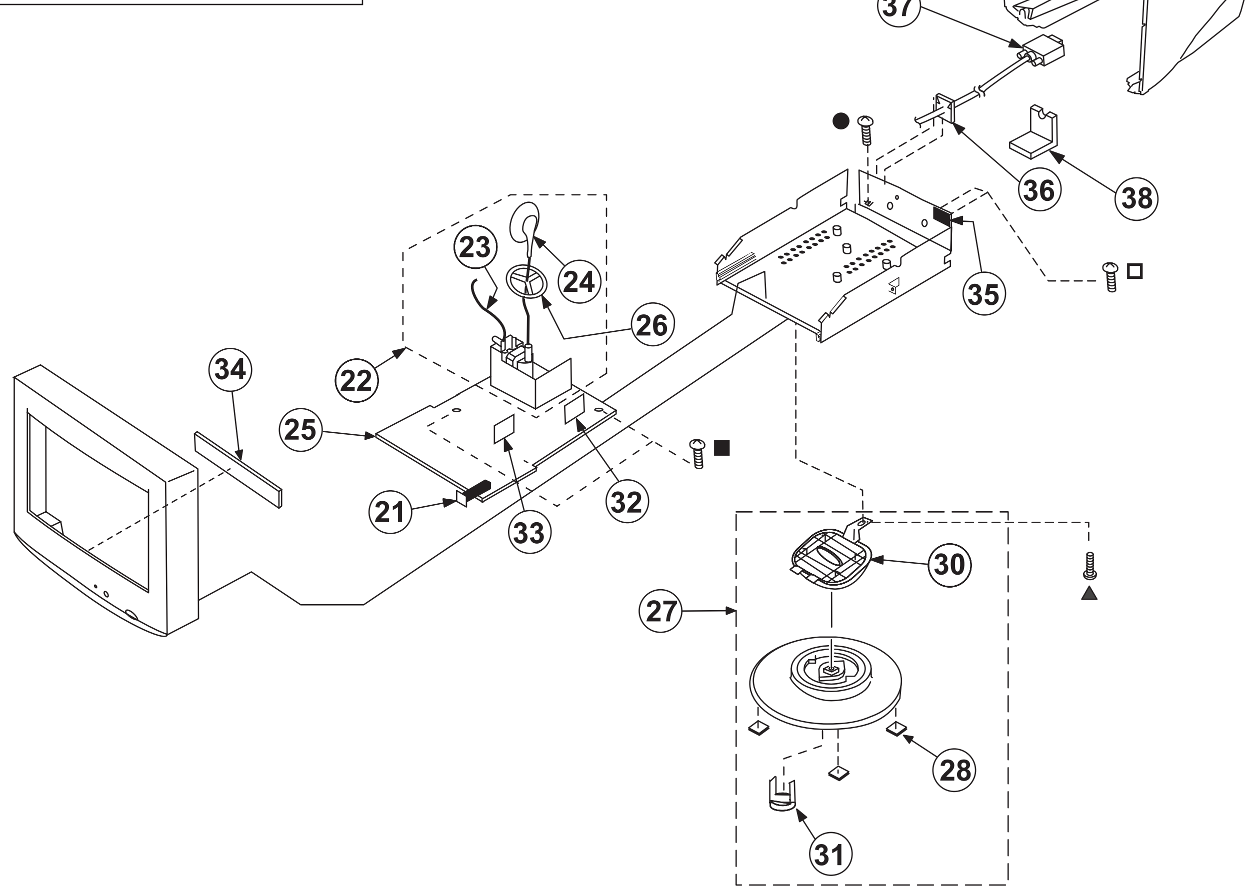
	REF.NO.	PART NO.	DESCRIPTION
*	11	A-1299-559-B	A BOARD, COMPLETE (VAIO COLOR)
⚠	12	1-419-285-21	COIL, DEGAUSSING
	13	4-041-021-11	HOLDER, DEGAUSSING COIL
*	14	4-061-573-11	SPRING, TENSION
	15	X-4039-287-1	SHIELD ASSY, EMI
*	16	4-080-258-11	CABINET
*	16	4-080-258-22	CABINET (VAIO COLOR)
*	17	4-084-760-01	LABEL, INFORMATION
*	17	4-084-760-11	LABEL, INFORMATION (VAIO ONLY)
	18	1-419-129-51	COIL, LANDING CORRECTION
	19	4-071-175-01	HOLDER, DGC
⚠	20	8-734-065-06	ITC ASSEMBLY (19TKC-R7)

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-2. CHASSIS

● 7-685-872-09	SCREW +BVTT 3x8
■ 7-685-647-79	SCREW +BVTP 3x10
▲ 7-685-881-09	SCREW +BVTT 4x8
□ 4-052-345-01	SCREW, (3x8) (+K) TAPPING



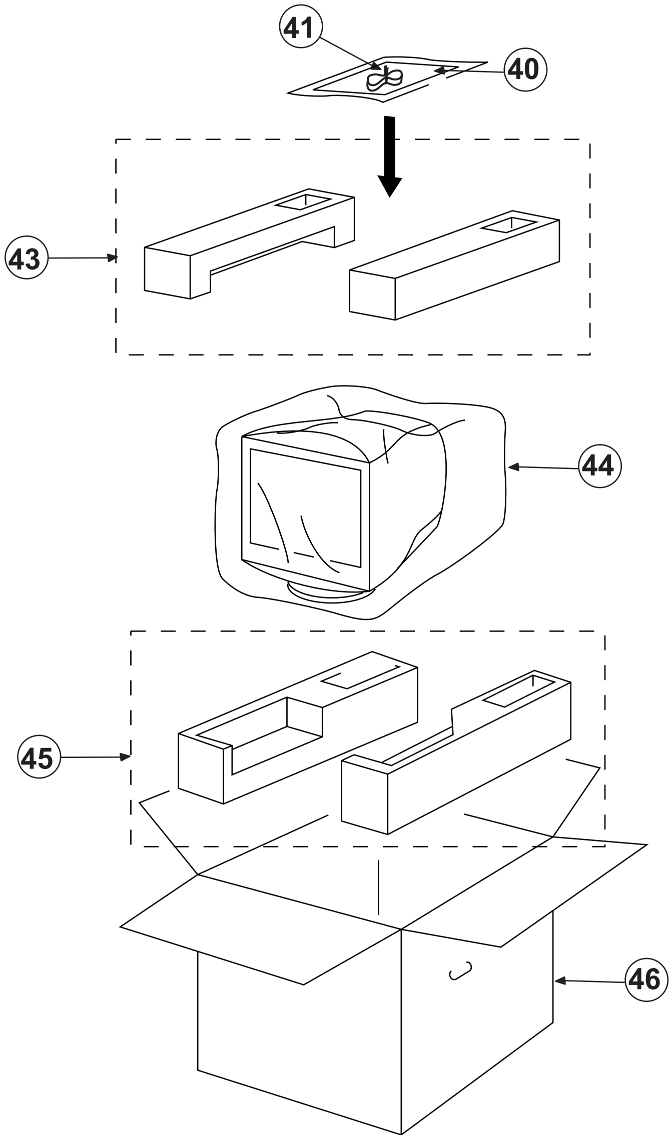
	REF.NO.	PART NO.	DESCRIPTION	[Assembly Includes]
	21	4-084-761-01	BAR, EXTENSION	
⚠	22	1-453-377-11	FBT ASSY (NX-4703/VQM4)	23-24
			The high voltage leads associated with the FBT on this board are not included and must be ordered separately. (23-24)	
⚠	23	1-900-805-55	WIRE ASSY, FOCUS LEAD	
⚠	24	1-251-642-13	CAP ASSY, HIGH-VOLTAGE	
*	25	A-1348-101-A	D BOARD, COMPLETE	
*	25	A-1348-101-B	D BOARD, COMPLETE (VAIO COLOR)	
	26	3-704-372-31	HOLDER, HV CABLE	
	27	X-4039-382-1	BASE ASSY, STAND	28, 30. 31
	27	X-4039-571-1	BASE ASSY, STAND (VAIO COLOR)	28, 30, 31
*	28	4-060-533-01	CUSHION	
	30	4-080-256-31	SLIDER	
	30	4-080-256-81	SLIDER (VAIO COLOR)	
	31	4-080-252-02	STOPPER	

	REF.NO.	PART NO.	DESCRIPTION
*	32	A-1391-154-A	N BOARD, MOUNTED
*	33	A-1333-141-A	DA BOARD, MOUNTED
*	34	A-1377-044-A	H1 BOARD, MOUNTED
⚠	35	1-251-681-11	INLET, AC
*	36	4-081-651-01	HOLDER, CABLE
*	37	1-757-306-61	CABLE WITH CONNECTOR
*	37	1-757-306-71	CABLE WITH CONNECTOR (VAIO COLOR)
	38	4-080-253-01	COVER, PIGTAIL
	38	4-080-253-31	COVER, PIGTAIL (VAIO COLOR)

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

5-3. PACKING MATERIALS



	REF.NO.	PART NO.	DESCRIPTION
	40	4-084-759-11	MANUAL, INSTRUCTION
⚠	41	1-782-783-31	CORD SET, POWER
*	43	4-080-514-02	CUSHION, UPPER
*	43	4-080-514-11	CUSHION, UPPER (VAIO COLOR)
	44	4-041-927-11	BAG, PROTECTION
*	45	4-080-515-01	CUSHION, LOWER
*	46	4-084-758-01	CARTON, INDIVIDUAL

SECTION 6: ELECTRICAL PARTS LIST

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components in this manual identified by the following symbol: ⧓ indicate parts that have been carefully factory-selected to satisfy regulations regarding X-ray radiation for each set.

Should replacement be required for one of these components, replace only with the value originally used.

*** Items marked with an asterisk are not stocked since they are seldom required for routine service. Expect some delay when ordering these components.**

RESISTORS
- **All resistors are in ohms**
- **F : nonflammable**
- **All variable and adjustable resistors have characteristic curve B, unless otherwise noted.**

H1 A

When ordering parts by reference number, please include the board name.

H1

	REF.NO.	PART NO.	DESCRIPTION	VALUES		
*		**A-1377-044-A**	**H1 BOARD, MOUNTED**			
		CAPACITOR				
	C1407	1-126-947-11	ELECT	47µF	20%	16V
	C1498	1-130-495-00	MYLAR	0.1µF	5%	50V
		CONNECTOR				
*	CN1400	1-564-523-11	PLUG,CONNECTOR	8P		
		DIODE				
	D1400	8-719-056-13	DIODE SML79423C-TP15			
		FERRITE BEAD				
	FB1402	1-412-911-11	FERRITE	0µH		
	FB1403	1-412-911-11	FERRITE	0µH		
		TRANSISTOR				
	Q1400	8-729-029-66	TRANSISTOR DTC114ESA-TP			
	Q1401	8-729-029-68	TRANSISTOR DTC114TSA-TP			
		RESISTOR				
	R1400	1-215-405-00	METAL	220	1%	1/4W
	R1401	1-215-405-00	METAL	220	1%	1/4W
	R1402	1-215-397-00	METAL	100	1%	1/4W
	R1403	1-215-397-00	METAL	100	1%	1/4W
	R1404	1-215-413-00	METAL	470	1%	1/4W
	R1406	1-249-407-11	CARBON	150	5%	1/4W
	R1407	1-249-409-11	CARBON	220	5%	1/4W
	R1419	1-249-441-11	CARBON	100K	5%	1/4W
	R1420	1-249-429-11	CARBON	10K	5%	1/4W
	R1421	1-215-445-00	METAL	10K	1%	1/4W
	R1424	1-215-453-00	METAL	22K	1%	1/4W
		SWITCH				
	S1405	1-762-196-21	SWITCH, TACTILE			
	S1406	1-786-155-11	SWITCH, TACTILE			
		THERMISTOR				
	TH1400	1-807-796-11	THERMISTOR			

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	REF.NO.	PART NO.	DESCRIPTION	VALUES		
*		**A-1299-559-A**	**A BOARD, COMPLETE**			
*		**A-1299-559-B**	**A BOARD, COMPLETE (VAIO COLOR)**			
		4-382-854-01	SCREW (M3X8), P, SW (+)			
		CAPACITOR				
	C001	1-162-318-11	CERAMIC	0.001µF	10%	500V
	C002	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C005	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C007	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
	C009	1-115-871-11	ELECT	1µF	20%	50V
	C011	1-106-220-00	MYLAR	0.1µF	10%	100V
	C012	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
	C014	1-107-930-91	ELECT	22µF	20%	100V
	C015	1-107-823-11	CERAMIC CHIP	0.47µF	10%	16V
	C016	1-126-935-11	ELECT	470µF	20%	16V
	C017	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C018	1-107-649-11	ELECT	2.2µF	20%	250V
	C019	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
	C021	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
	C022	1-126-947-11	ELECT	47µF	20%	10V
	C023	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
	C024	1-126-791-11	ELECT	10µF	20%	16V
	C026	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
	C027	1-126-785-11	ELECT	47µF	20%	10V
	C029	1-164-489-11	CERAMIC CHIP	0.22µF	10%	16V
	C031	1-162-318-11	CERAMIC	0.001µF	10%	500V
	C033	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
	C035	1-104-574-11	CERAMIC	.0047µF	10%	2KV

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
C036	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C037	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C038	1-163-017-00	CERAMIC CHIP	.0047μF	10%	50V
C039	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C042	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C043	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C046	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C048	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C050	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C051	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C053	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C054	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C055	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
C057	1-126-947-11	ELECT	47μF	20%	10V
C058	1-163-089-00	CERAMIC CHIP	6pF	0.50pF	50V
C059	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C060	1-164-346-11	CERAMIC CHIP	1μF		16V
C061	1-163-255-11	CERAMIC CHIP	150pF	5%	50V
C062	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C063	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C064	1-126-933-11	ELECT	100μF	20%	16V
C065	1-126-933-11	ELECT	100μF	20%	16V
C067	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C091	1-115-871-11	ELECT	1μF	20%	50V
C092	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C101	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C106	1-117-450-11	MYLAR	0.47μF	10%	250V
C111	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C112	1-163-224-11	CERAMIC CHIP	7pF	0.25pF	50V
C123	1-136-189-00	MYLAR	0.1μF	10%	250V
C130	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C152	1-126-947-11	ELECT	47μF	20%	25V
C201	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C205	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C206	1-117-450-11	MYLAR	0.47μF	10%	250V
C211	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C212	1-163-222-11	CERAMIC CHIP	5pF	0.25pF	50V
C223	1-136-189-00	MYLAR	0.1μF	10%	250V
C230	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C252	1-126-947-11	ELECT	47μF	20%	25V
C301	1-163-227-11	CERAMIC CHIP	10pF	0.50pF	50V
C305	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C306	1-117-450-11	MYLAR	0.47μF	10%	250V
C311	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
C312	1-163-224-11	CERAMIC CHIP	7pF	0.25pF	50V
C323	1-136-189-00	MYLAR	0.1μF	10%	250V
C330	1-164-489-11	CERAMIC CHIP	0.22μF	10%	16V
C352	1-126-947-11	ELECT	47μF	20%	25V

REF.NO.	PART NO.	DESCRIPTION	VALUES
	CONNECTOR		
CN303	1-695-915-11	TAB (CONTACT)	
* CN311	1-778-671-11	CONNECTOR, BOARD TO BOARD	10P
CN313	1-785-120-11	PIN,CONNECTOR (PC BOARD)	9P
* CN315	1-778-682-11	PIN,CONNECTOR (PC BOARD)	8P
CN318	1-764-101-11	PIN,CONNECTOR (PC BOARD)	2P
	DIODE		
D001	8-719-801-78	DIODE MA151WK-TX	
D002	8-719-109-89	DIODE NNCD5.6A-T1	
D003	8-719-109-89	DIODE NNCD5.6A-T1	
D004	8-719-062-51	DIODE 1PS226-115	
D005	8-719-062-51	DIODE 1PS226-115	
D007	8-719-109-89	DIODE NNCD5.6A-T1	
D008	8-719-109-89	DIODE NNCD5.6A-T1	
D014	8-719-911-19	DIODE 1SS119-25TD	
D104	8-719-052-12	DIODE HSU83TRF	
D105	8-719-052-12	DIODE HSU83TRF	
D106	8-719-052-12	DIODE HSU83TRF	
D111	8-719-062-51	DIODE 1PS226-115	
D204	8-719-052-12	DIODE HSU83TRF	
D205	8-719-052-12	DIODE HSU83TRF	
D206	8-719-052-12	DIODE HSU83TRF	
D211	8-719-062-51	DIODE 1PS226-115	
D304	8-719-052-12	DIODE HSU83TRF	
D305	8-719-052-12	DIODE HSU83TRF	
D306	8-719-052-12	DIODE HSU83TRF	
D311	8-719-062-51	DIODE 1PS226-115	
	FERRITE BEAD		
FB001	1-414-231-22	FERRITE	0μH
FB002	1-414-231-22	FERRITE	0μH
FB003	1-412-911-11	FERRITE	0μH
FB004	1-412-911-11	FERRITE	0μH
FB005	1-412-911-11	FERRITE	0μH
FB102	1-469-965-21	INDUCTOR	0μH
FB103	1-469-965-21	INDUCTOR	0μH
FB104	1-412-911-11	FERRITE	0μH
FB110	1-412-911-11	FERRITE	0μH
FB202	1-469-965-21	INDUCTOR	0μH
FB203	1-469-965-21	INDUCTOR	0μH
FB210	1-412-911-11	FERRITE	0μH
FB302	1-469-965-21	INDUCTOR	0μH
FB303	1-469-965-21	INDUCTOR	0μH
FB310	1-412-911-11	FERRITE	0μH

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REF.NO.	PART NO.	DESCRIPTION	VALUES
	IC		
IC001	6-700-496-01	IC M61314SP	
IC002	8-759-824-97	IC LM2412T	
IC003	6-700-723-01	IC CXD9164M	
IC004	8-749-019-80	IC H8D3095	
IC005	8-759-058-60	IC TC7SU04FU(TE85R)	
IC006	8-759-584-98	IC SN74AHCT04NSR	
IC009	8-759-640-39	IC BR24C02F-WE2	
IC011	8-759-592-79	IC BA00AST-V5	
	JACK		
⚠ J001	1-451-524-11	SOCKET, CRT	
	CHIP CONDUCTOR		
JR1	1-216-296-11	SHORT	
JR2	1-216-295-91	SHORT	
JR3	1-216-296-11	SHORT	
JR4	1-216-296-11	SHORT	
JR5	1-216-296-11	SHORT	
JR6	1-216-296-11	SHORT	
JR7	1-216-296-11	SHORT	
JR8	1-216-296-11	SHORT	
JR10	1-216-296-11	SHORT	
JR11	1-216-295-91	SHORT	
JR12	1-216-296-11	SHORT	
JR13	1-216-295-91	SHORT	
JR14	1-216-295-91	SHORT	
JR15	1-216-295-91	SHORT	
JR16	1-216-296-11	SHORT	
JR17	1-216-296-11	SHORT	
	COIL		
L001	1-412-537-31	INDUCTOR	100µH
L002	1-412-549-11	INDUCTOR	1MH
L003	1-412-537-31	INDUCTOR	100µH
L004	1-412-529-11	INDUCTOR	22µH
L005	1-412-537-31	INDUCTOR	100µH
L006	1-412-537-31	INDUCTOR	100µH
L007	1-412-537-31	INDUCTOR	100µH
L008	1-412-537-31	INDUCTOR	100µH
	TRANSISTOR		
Q004	8-729-025-28	TRANSISTOR 2SK1828TE85L	
Q005	8-729-025-28	TRANSISTOR 2SK1828TE85L	

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R001	1-216-077-91	RES-CHIP	15K	5%	1/10W
R002	1-216-077-91	RES-CHIP	15K	5%	1/10W
R003	1-216-077-91	RES-CHIP	15K	5%	1/10W
R006	1-216-041-00	RES-CHIP	470	5%	1/10W
R007	1-216-025-11	RES-CHIP	100	5%	1/10W
R011	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R012	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R013	1-216-025-11	RES-CHIP	100	5%	1/10W
R014	1-216-025-11	RES-CHIP	100	5%	1/10W
R017	1-216-025-11	RES-CHIP	100	5%	1/10W
R018	1-216-025-11	RES-CHIP	100	5%	1/10W
R020	1-216-025-11	RES-CHIP	100	5%	1/10W
R021	1-216-025-11	RES-CHIP	100	5%	1/10W
R023	1-216-049-11	RES-CHIP	1K	5%	1/10W
R024	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R025	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R027	1-216-017-91	RES-CHIP	47	5%	1/10W
R028	1-216-017-91	RES-CHIP	47	5%	1/10W
R031	1-216-077-91	RES-CHIP	15K	5%	1/10W
R032	1-216-025-11	RES-CHIP	100	5%	1/10W
R033	1-208-774-11	METAL CHIP	470	0.50%	1/10W
R034	1-216-055-00	RES-CHIP	1.8K	5%	1/10W
R040	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R041	1-216-073-91	RES-CHIP	10K	5%	1/10W
R046	1-216-295-91	SHORT			
R047	1-216-295-91	SHORT			
R052	1-259-884-11	CARBON	4.7M	5%	1/4W
R053	1-216-017-91	RES-CHIP	47	5%	1/10W
R057	1-216-295-91	SHORT			
R059	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R061	1-249-441-11	CARBON	100K	5%	1/4W
R062	1-247-895-91	CARBON	470K	5%	1/4W
R063	1-247-895-91	CARBON	470K	5%	1/4W
R064	1-260-127-11	CARBON	220K	5%	1/2W
R078	1-208-799-11	METAL CHIP	5.1K	0.50%	1/10W
R079	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R080	1-208-792-11	METAL CHIP	2.7K	0.50%	1/10W
R082	1-216-369-00	METAL OXIDE	1	5%	2W
R093	1-216-041-00	RES-CHIP	470	5%	1/10W
R098	1-216-089-91	RES-CHIP	47K	5%	1/10W
R104	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R106	1-216-689-11	RES-CHIP	39K	5%	1/10W
R107	1-216-085-91	RES-CHIP	33K	5%	1/10W
R109	1-216-121-11	RES-CHIP	1M	5%	1/10W
R110	1-216-049-11	RES-CHIP	1K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
R111	1-249-403-11	CARBON	68	5%	1/4W
R117	1-216-017-91	RES-CHIP	47	5%	1/10W
R122	1-216-121-11	RES-CHIP	1M	5%	1/10W
R130	1-247-807-31	CARBON	100	5%	1/4W
R133	1-469-965-21	INDUCTOR	0μH		
R151	1-219-742-11	CARBON	47	5%	1/2W
R161	1-215-394-00	METAL	75	1%	1/4W
R163	1-216-025-11	RES-CHIP	100	5%	1/10W
R204	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R206	1-216-689-11	RES-CHIP	39K	5%	1/10W
R207	1-216-085-91	RES-CHIP	33K	5%	1/10W
R209	1-216-121-11	RES-CHIP	1M	5%	1/10W
R210	1-216-049-11	RES-CHIP	1K	5%	1/10W
R211	1-249-403-11	CARBON	68	5%	1/4W
R217	1-216-017-91	RES-CHIP	47	5%	1/10W
R222	1-216-121-11	RES-CHIP	1M	5%	1/10W
R230	1-247-807-31	CARBON	100	5%	1/4W
R233	1-469-965-21	INDUCTOR	0μH		
R251	1-219-742-11	CARBON	47	5%	1/2W
R261	1-215-394-00	METAL	75	1%	1/4W
R263	1-216-025-11	RES-CHIP	100	5%	1/10W
R304	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R306	1-216-689-11	RES-CHIP	39K	5%	1/10W
R307	1-216-085-91	RES-CHIP	33K	5%	1/10W
R309	1-216-121-11	RES-CHIP	1M	5%	1/10W
R310	1-216-061-91	RES-CHIP	3.3K	5%	1/10W
R311	1-249-403-11	CARBON	68	5%	1/4W
R317	1-216-013-00	RES-CHIP	33	5%	1/10W
R322	1-216-121-11	RES-CHIP	1M	5%	1/10W
R330	1-247-807-31	CARBON	100	5%	1/4W
R333	1-469-965-21	INDUCTOR	0μH		
R351	1-219-742-11	CARBON	47	5%	1/2W
R361	1-215-394-00	METAL	75	1%	1/4W
R363	1-216-025-11	RES-CHIP	100	5%	1/10W

SPARK GAP

SG001	1-519-422-11	GAP, SPARK
SG002	1-576-354-21	GAP, SPARK
SG101	1-576-354-21	GAP, SPARK
SG201	1-576-354-21	GAP, SPARK
SG301	1-576-354-21	GAP, SPARK

CRYSTAL

X001	1-760-682-21	VIBRATOR, CRYSTAL

D

REF.NO.	PART NO.	DESCRIPTION	VALUES		
*	**A-1348-101-A**	**D BOARD, COMPLETE**			
*	**A-1348-101-B**	**D BOARD, COMPLETE (VAIO COLOR)**			

The high voltage leads associated with the FBT on this board are not included and must be ordered separately.

REF.NO.	PART NO.	DESCRIPTION	VALUES		
⚠ 23	1-900-805-55	WIRE ASSY, FOCUS LEAD			
⚠ 24	1-251-642-13	CAP ASSY, HIGH-VOLTAGE			
	1-923-503-13	TUBE DIA2.1 40MM TRP			
	3-710-578-01	COVER, VOLUME, 6 MOLD			
	4-081-496-01	HOLDER, IC			
	4-382-854-01	SCREW (M3X8), P, SW (+)			
	4-382-854-11	SCREW (M3X10), P, SW (+)			

CAPACITOR

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C401	1-128-528-11	ELECT	470μF	20%	25V
C402	1-137-401-11	MYLAR	0.22μF	10%	100V
C403	1-107-911-11	ELECT	220μF	20%	50V
C404	1-128-528-11	ELECT	470μF	20%	25V
C405	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V
C406	1-137-366-11	MYLAR	0.0022μF	5%	50V
C407	1-163-019-00	CERAMIC CHIP	0.0068μF	10%	50V
C408	1-163-222-11	CERAMIC CHIP	5pF	0.25pF	50V
C500	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C503	1-130-495-00	MYLAR	0.1μF	5%	50V
C504	1-163-017-00	CERAMIC CHIP	.0047μF	10%	50V
C505	1-126-949-11	ELECT	220μF	20%	35V
C506	1-127-810-51	ELECT	22μF	20%	250V
C507	1-136-187-11	MYLAR	0.047μF	10%	250V
C508	1-137-718-11	FILM	4300pF	3%	1.8KV
C509	1-107-444-11	CERAMIC	100pF	5%	2KV
C510	1-136-684-51	MYLAR	0.0022μF	10%	100V
C511	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C512	1-163-005-91	CERAMIC CHIP	470pF	10%	50V
C513	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C514	1-163-017-00	CERAMIC CHIP	.0047μF	10%	50V
C516	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C517	1-137-150-11	MYLAR	0.01μF	10%	100V
C518	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C519	1-126-935-11	ELECT	470μF	20%	16V
C520	1-163-005-91	CERAMIC CHIP	470pF	10%	50V
C521	1-130-471-00	MYLAR	0.001μF	5%	50V
C522	1-107-888-11	ELECT	47μF	20%	25V
C534	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C535	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C536	1-107-665-11	ELECT	0.47μF	20%	400V
C537	1-165-693-11	FILM	0.2μF	3	400V

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

D

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C538	1-107-651-11	ELECT	4.7μF	20%	250V
C539	1-115-356-11	FILM	1.2μF	5%	250V
C540	1-107-888-11	ELECT	47μF	20%	25V
C541	1-109-844-11	FILM	0.68μF	5%	250V
C542	1-164-346-11	CERAMIC CHIP	1μF		16V
C543	1-117-665-11	FILM	0.33μF	5%	250V
C544	1-164-005-11	CERAMIC CHIP	0.47μF		16V
C545	1-117-661-11	FILM	0.15μF	5%	250V
C546	1-164-222-91	CERAMIC CHIP	0.22μF		25V
C547	1-136-060-00	FILM	0.047μF	5%	400V
C548	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C552	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C557	1-126-947-11	ELECT	47μF	20%	25V
C559	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C562	1-107-882-91	ELECT	100μF	20%	16V
C563	1-164-646-11	CERAMIC	2200pF	10%	500V
C564	1-107-823-11	CERAMIC CHIP	0.47μF	10%	16V
C576	1-163-243-11	CERAMIC CHIP	47pF	5%	50V
C582	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C601	1-136-189-00	MYLAR	0.1μF	10%	250V
C602	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C604	1-126-947-11	ELECT	47μF	20%	25V
C605	1-113-924-11	CERAMIC	.0047μF	20%	250V
C606	1-113-924-11	CERAMIC	.0047μF	20%	250V
C607	1-128-563-11	ELECT	100μF	20%	100V
C608	1-115-339-11	CERAMIC CHIP	0.1μF	10%	50V
C609	1-113-907-51	CERAMIC	0.0022μF	20%	250V
C610	1-162-116-00	CERAMIC	680pF	10%	2KV
C611	1-117-753-11	ELECT(BLOCK)	470μF	20%	450V
C612	1-131-985-21	FILM	0.033μF	5%	250V
C613	1-126-947-11	ELECT	47μF	20%	25V
C614	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C615	1-163-037-11	CERAMIC CHIP	0.022μF	10%	50V
C616	1-102-228-00	CERAMIC	470pF	10%	500V
C617	1-162-116-00	CERAMIC	680pF	10%	2KV
C618	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C619	1-163-019-00	CERAMIC CHIP	0.0068μF	10%	50V
C620	1-126-947-11	ELECT	47μF	20%	25V
C621	1-131-723-21	ELECT(BLOCK)	220μF	20%	250V
C622	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V
C623	1-107-933-11	ELECT	100μF	20%	100V
C624	1-104-666-11	ELECT	220μF	20%	25V
C625	1-115-789-11	ELECT	0.001F	20%	25V
C626	1-115-791-11	ELECT	0.0018F	20%	25V
C627	1-115-789-11	ELECT	0.001F	20%	25V
C628	1-128-548-11	ELECT	4700μF	20%	25V
C629	1-126-965-91	ELECT	22μF	20%	50V

REF.NO.	PART NO.	DESCRIPTION	VALUES		
C630	1-126-947-11	ELECT	47μF	20%	25V
C631	1-128-526-11	ELECT	100μF	20%	25V
C632	1-104-653-11	ELECT	220μF	20%	16V
C634	1-126-934-11	ELECT	220μF	20%	10V
C635	1-126-934-11	ELECT	220μF	20%	10V
⚠ C636	1-113-900-11	CERAMIC	470pF	10%	250V
⚠ C637	1-113-900-11	CERAMIC	470pF	10%	250V
C638	1-104-708-11	MYLAR	0.47μF	20%	250V
C639	1-104-708-11	MYLAR	0.47μF	20%	250V
C640	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C641	1-163-007-11	CERAMIC CHIP	680pF	10%	50V
C642	1-163-005-91	CERAMIC CHIP	470pF	10%	50V
C644	1-136-187-11	MYLAR	0.047μF	10%	250V
C645	1-126-947-11	ELECT	47μF	20%	25V
C646	1-107-674-91	ELECT	0.47μF	20%	450V
C647	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C648	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C649	1-126-929-11	ELECT	4700μF	20%	10V
C650	1-162-117-00	CERAMIC	100pF	10%	500V
C651	1-164-346-11	CERAMIC CHIP	1μF		16V
C652	1-126-964-11	ELECT	10μF	20%	50V
C653	1-126-943-11	ELECT	2200μF	20%	25V
C654	1-104-666-11	ELECT	220μF	20%	25V
C657	1-162-318-11	CERAMIC	0.001μF	10%	500V
C701	1-163-003-11	CERAMIC CHIP	330pF	10%	50V
C703	1-163-003-11	CERAMIC CHIP	330pF	10%	50V
C704	1-137-150-11	MYLAR	0.01μF	5%	50V
C705	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C706	1-137-150-11	MYLAR	0.01μF	5%	50V
C707	1-104-666-11	ELECT	220μF	20%	25V
C708	1-104-666-11	ELECT	220μF	20%	25V
C711	1-163-239-11	CERAMIC CHIP	33pF	5%	50V
C712	1-163-239-11	CERAMIC CHIP	33pF	5%	50V
C713	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C714	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C718	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C719	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C720	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C721	1-128-562-11	ELECT	47μF	20%	100V
C723	1-128-560-11	ELECT	22μF	20%	100V
C724	1-162-134-11	CERAMIC	470pF	10%	2KV
C726	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C727	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C730	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V
C734	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C736	1-126-967-11	ELECT	47μF	20%	50V
C737	1-126-967-11	ELECT	47μF	20%	50V

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
C738	1-136-169-00	FILM	0.22μF	5%	50V
C761	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C901	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
C902	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V
C903	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C904	1-126-947-11	ELECT	47μF	20%	25V
C905	1-163-259-91	CERAMIC CHIP	220pF	5%	50V
C906	1-137-372-11	MYLAR	0.022μF	5%	50V
C907	1-137-150-11	MYLAR	0.01μF	10%	100V
C908	1-137-401-11	MYLAR	0.22μF	10%	100V
C909	1-106-375-12	MYLAR	0.022μF	10%	100V
C910	1-162-117-00	CERAMIC	100pF	10%	500V
C913	1-135-842-51	ELECT	47μF	20%	250V
C915	1-137-867-11	FILM	0.00047μF	5%	250V
C916	1-117-665-11	FILM	0.33μF	5%	250V
C918	1-117-629-11	FILM	2700pF	3%	1.2KV
C919	1-115-349-51	CERAMIC	0.01μF		2KV
C920	1-115-349-51	CERAMIC	0.01μF		2KV
C921	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C923	1-126-959-11	ELECT	0.47μF	20%	50V
C929	1-126-963-11	ELECT	4.7μF	20%	50V
C930	1-136-169-00	FILM	0.22μF	5%	50V
C932	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C933	1-126-947-11	ELECT	47μF	20%	25V
C935	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C936	1-163-009-91	CERAMIC CHIP	0.001μF	10%	50V
C937	1-126-961-11	ELECT	2.2μF	20%	50V
C938	1-126-935-11	ELECT	470μF	20%	16V
C939	1-137-105-11	MYLAR	0.01μF	10%	250V
C1623	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C1627	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1629	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1630	1-163-038-91	CERAMIC CHIP	0.1μF		25V
C1631	1-163-038-91	CERAMIC CHIP	0.1μF		25V

CONNECTOR

	REF.NO.	PART NO.	DESCRIPTION	VALUES
*	CN501	1-793-239-11	PIN,CONNECTOR (PC BOARD)	6P
*	CN600	1-691-960-11	PIN,CONNECTOR (PC BOARD)	3P
*	CN601	1-580-689-11	PIN,CONNECTOR (PC BOARD)	4P
	CN604	1-770-724-11	CONNECTOR, BOARD TO BOARD	9P
	CN904	1-695-915-11	TAB (CONTACT)	
	CN1102	1-766-921-11	CONNECTOR, BOARD TO BOARD	10P
*	CN1101	1-508-879-11	BASE POST	4P
*	CN1103	1-564-509-11	PLUG,CONNECTOR	6P
*	CN1602	1-564-506-11	PLUG,CONNECTOR	3P

DIODE

REF.NO.	PART NO.	DESCRIPTION	VALUES
D401	8-719-979-58	DIODE EGP10GPKG23	
D405	8-719-109-85	DIODE RD5.1ES-T1B2	
D501	8-719-110-47	DIODE HZS182-TE	
D502	8-719-981-00	DIODE D3S4M	
D503	8-719-110-47	DIODE HZS182-TE	
D504	8-719-061-21	DIODE PG124S15	
D505	8-719-052-86	DIODE D2L40-TA	
D506	8-719-062-89	DIODE HZS5B2-TE	
D507	8-719-979-58	DIODE EGP10GPKG23	
D508	8-719-032-11	DIODE 11EQS03LN-TA1B2	
D510	8-719-082-50	DIODE 11DF2N-TA2B2	
D516	8-719-052-90	DIODE D1NL40-TA	
D517	8-719-082-50	DIODE 11DF2N-TA2B2	
D520	8-719-911-19	DIODE 1SS119-25TD	
D521	8-719-911-19	DIODE 1SS119-25TD	
D601	8-719-110-08	DIODE RD8.2ES-T1B2	
D602	8-719-110-36	DIODE RD13ES-T1B2	
D603	8-719-404-50	DIODE MA111-TX	
D604	8-719-110-49	DIODE RD18ES-T1B2	
D605	8-719-033-53	DIODE RD6.8ES-T1B2	
D606	8-719-068-00	DIODE ERC04-06SE	
D607	8-719-404-50	DIODE MA111-TX	
D608	8-719-991-33	DIODE 1SS133T-77	
D609	8-719-053-19	DIODE μF4007G23	
D610	8-719-921-40	DIODE MTZJ-T-77-4.7B	
D611	8-719-053-19	DIODE μF4007G23	
D612	8-719-110-49	DIODE MTZJ-T-77-18	
D613	8-719-300-76	DIODE RGP10DG23	
D614	8-719-067-68	DIODE FMC-26UA	
D615	8-719-053-19	DIODE μF4007G23	
D616	8-719-076-20	DIODE BT149G-412-OT359	
D617	8-719-991-33	DIODE 1SS133T-77	
D618	8-719-069-63	DIODE ERB38-06V1	
D619	8-719-058-38	DIODE FMN-G12S	
D620	8-719-510-41	DIODE D10SC9M	
D621	8-719-032-12	DIODE DINS6-TA-4060	
D622	8-719-074-79	DIODE D4L20U	
D623	8-719-068-00	DIODE ERC04-06SE	
D624	8-719-404-50	DIODE MA111-TX	
D625	8-719-510-53	DIODE D4SB60L-F	
D626	8-719-991-33	DIODE 1SS133T-77	
D627	8-719-911-19	DIODE 1SS119-25TD	
D628	8-719-991-33	DIODE 1SS133T-77	
D629	8-719-404-50	DIODE MA111-TX	
D630	8-719-110-41	DIODE RD15ES-T1B2	

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NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	VALUES
D631	8-719-300-76	DIODE RGP10DG23	
D632	8-719-300-76	DIODE RGP10DG23	
D633	8-719-083-83	DIODE UDZS-TE17-15B	
D634	8-719-083-83	DIODE UDZS-TE17-15B	
D635	8-719-032-11	DIODE 11EQS03LN-TA1B2	
D636	8-719-158-49	DIODE UDZ-TE-17-12B	
D639	8-719-109-72	DIODE RD3.9ES-T1B2	
D701	8-719-911-19	DIODE 1SS119-25TD	
D702	8-719-911-19	DIODE 1SS119-25TD	
D703	8-719-911-19	DIODE 1SS119-25TD	
D902	8-719-110-08	DIODE RD8.2ES-T1B2	
D906	8-719-977-40	DIODE UDZ-TE-17-13B	
D907	8-719-052-86	DIODE D2L40-TA	
D909	8-719-110-47	DIODE HZS182-TE	
D910	8-719-028-72	DIODE RP1H-V1	
D911	8-719-018-82	DIODE ERA34-10TP1	
D912	8-719-110-42	DIODE RD15ES-T1B3	
D914	8-719-970-83	DIODE HSS82-TJ	
D917	8-719-110-03	DIODE RD7.5ES-T1B2	
D918	8-719-404-50	DIODE MA111-TX	
D919	8-719-069-54	DIODE UDZSTE-175.1B	
D920	8-719-977-28	DIODE UDZSTE-1710B	
D923	8-719-404-50	DIODE MA111-TX	

FUSE

REF.NO.	PART NO.	DESCRIPTION	VALUES
⚠ F601	1-576-233-11	FUSE (H.B.C.)	

FERRITE BEAD

REF.NO.	PART NO.	DESCRIPTION	VALUES
FB501	1-410-397-21	FERRITE	1.1μH
FB502	1-410-396-41	FERRITE	0.45μH
FB503	1-410-396-41	FERRITE	0.45μH
FB504	1-410-396-41	FERRITE	0.45μH
FB505	1-412-473-21	INDUCTOR	0μH
FB601	1-412-911-11	FERRITE	0μH
FB602	1-410-397-21	FERRITE	1.1μH
FB603	1-410-397-21	FERRITE	1.1μH
FB1000	1-414-231-22	FERRITE	0μH
FB1002	1-216-295-91	SHORT	
FB1005	1-216-295-91	SHORT	
FB1604	1-410-397-21	FERRITE	1.1μH

FUSE HOLDER

REF.NO.	PART NO.	DESCRIPTION	VALUES
FH601	1-533-223-11	HOLDER, FUSE	
FH602	1-533-223-11	HOLDER, FUSE	

IC

REF.NO.	PART NO.	DESCRIPTION	VALUES
IC401	8-759-593-28	IC LA78040	
IC501	8-759-570-29	IC UPC6757CS	
IC601	8-759-450-47	IC BA05T	
IC603	8-759-594-75	IC TEA1504/N2	
IC604	8-759-637-83	IC PQ12RD8S	
IC605	8-759-496-15	IC BA05ST-V5	
⚠ IC607	8-749-016-35	IC TLP621D4-Y-LF2T	
IC608	8-759-586-17	IC TL1431CZ-AP	
IC610	8-759-592-79	IC BA00AST-V5	
IC611	8-759-700-07	IC NJM2903M-TE2	
IC701	8-759-822-38	IC LA6510	
IC702	8-749-018-54	IC STK391-120	
IC703	8-759-803-42	IC LA6500-FA	
IC902	8-759-701-01	IC NJM2904M(TE2)	
IC1603	8-759-822-07	IC LA6515	

CHIP CONDUCTOR

REF.NO.	PART NO.	DESCRIPTION	VALUES
JR1	1-216-295-91	SHORT	
JR2	1-216-296-11	SHORT	
JR3	1-216-295-91	SHORT	
JR4	1-216-296-11	SHORT	
JR5	1-216-295-91	SHORT	
JR6	1-216-295-91	SHORT	
JR7	1-216-296-11	SHORT	
JR8	1-216-295-91	SHORT	
JR9	1-216-295-91	SHORT	
JR10	1-216-295-91	SHORT	
JR12	1-216-296-11	SHORT	
JR14	1-216-295-91	SHORT	
JR15	1-216-296-11	SHORT	
JR16	1-216-295-91	SHORT	
JR17	1-216-295-91	SHORT	
JR18	1-216-295-91	SHORT	
JR19	1-216-295-91	SHORT	
JR20	1-216-295-91	SHORT	
JR21	1-216-295-91	SHORT	

COIL

REF.NO.	PART NO.	DESCRIPTION	VALUES
L501	1-412-537-31	INDUCTOR	100μH
L502	1-419-870-11	COIL, HORIZONTAL LINEARITY	
L504	1-406-675-11	INDUCTOR	4.7MH
L505	1-406-675-11	INDUCTOR	4.7MH
L506	1-406-673-11	INDUCTOR	2.2MH
L508	1-412-537-31	INDUCTOR	100μH
L510	1-411-594-41	INDUCTOR	5MH
⚠ L601	1-419-653-11	INDUCTOR	56MH
L602	1-406-665-11	INDUCTOR	100μH

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

NOTE: Les composants identifies per un trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

D

REF.NO.	PART NO.	DESCRIPTION	VALUES
L603	1-412-537-31	INDUCTOR	100μH
L604	1-406-665-11	INDUCTOR	100μH
L606	1-406-665-11	INDUCTOR	100μH
L608	1-414-487-41	INDUCTOR	1μH
⚠ L901	1-411-567-11	INDUCTOR	500μH
L902	1-406-973-21	INDUCTOR	22μH
L1001	1-412-911-11	FERRITE	0μH
	FILTER		
LF602	1-429-180-11	TRANSFORMER, LINE FILTER	
	TRANSISTOR		
Q501	8-729-120-28	TRANSISTOR 2SC1623-T1-L5L6	
Q502	8-729-049-86	TRANSISTOR 2PD602AR-115	
Q503	8-729-049-85	TRANSISTOR 2PB710AR-115	
Q504	8-729-043-53	TRANSISTOR 2SK2231	
Q505	8-729-056-66	TRANSISTOR 2SC5682-SONY-CA	
Q506	8-729-043-63	TRANSISTOR IRFI9634G-LF35	
Q507	8-729-120-28	TRANSISTOR 2SC2412K-T-146-QR	
Q510	8-729-140-96	TRANSISTOR 2SD774-T-34	
Q511	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q512	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q513	8-729-046-62	TRANSISTOR FS30KMJ-3-AZ	
Q514	8-729-043-41	TRANSISTOR 2SK2098-01MR-F119	
Q515	8-729-053-82	TRANSISTOR FS10KMJ-3-AZ	
Q601	8-729-030-02	TRANSISTOR DTC144ESA-TP	
Q602	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q603	8-729-029-92	TRANSISTOR DTC143ESA-TP	
Q605	8-729-050-14	TRANSISTOR 2SK3265(LB2SONY)	
Q606	8-729-900-53	TRANSISTOR DTC114EKA-T146	
Q607	8-729-027-31	TRANSISTOR DTA124EKA-T146	
Q608	8-729-029-92	TRANSISTOR DTC143ESA-TP	
Q609	8-729-119-78	TRANSISTOR 2SC3311A-RTA	
Q701	8-729-800-32	TRANSISTOR 2SC2362KG-AA	
Q702	8-729-178-43	TRANSISTOR 2SC2459-GR-TPE4	
Q703	8-729-204-91	TRANSISTOR 2SA1049TP-GR	
Q704	8-729-207-82	TRANSISTOR 2SC3421-Y	
Q705	8-729-207-89	TRANSISTOR 2SA1358-Y	
Q706	8-729-045-47	TRANSISTOR 2SC4620TV2Q	
Q707	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q708	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q901	8-729-035-54	TRANSISTOR 2SJ585LS-CB11	
Q902	8-729-056-68	TRANSISTOR FS5KM-16A-AT	
Q905	8-729-046-80	TRANSISTOR 2SC4634LS-CB11	
Q906	8-729-026-49	TRANSISTOR 2SA1037AK-T146-QR	
Q907	8-729-424-02	TRANSISTOR 2SB709A-QRS-TX	

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R401	1-249-383-11	CARBON	1.5	5%	1/4W
R402	1-215-867-00	METAL OXIDE	470	5%	1W
R403	1-214-796-00	METAL	1.5	1%	1/2W
R404	1-215-449-00	METAL	15K	1%	1/4W
R405	1-214-796-00	METAL	1.5	1%	1/2W
R406	1-215-451-00	METAL	18K	1%	1/4W
R407	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R408	1-216-101-00	RES-CHIP	150K	5%	1/10W
R409	1-208-810-11	METAL CHIP	15K	0.50%	1/10W
R410	1-208-812-11	METAL CHIP	18K	0.50%	1/10W
R412	1-260-292-11	CARBON	1	5%	1/2W
R413	1-260-292-11	CARBON	1	5%	1/2W
R501	1-216-049-11	RES-CHIP	1K	5%	1/10W
R502	1-216-025-11	RES-CHIP	100	5%	1/10W
R503	1-216-033-00	RES-CHIP	220	5%	1/10W
R504	1-216-073-91	RES-CHIP	10K	5%	1/10W
R505	1-216-081-00	RES-CHIP	22K	5%	1/10W
R506	1-249-393-11	CARBON	10	5%	1/4W
R507	1-249-433-11	CARBON	22K	5%	1/4W
R508	1-215-861-00	METAL OXIDE	47	5%	1W
R509	1-249-377-11	CARBON	0.47	5%	1/4W
R510	1-244-158-11	METAL	1.5	0.50%	10W
R513	1-216-423-11	METAL OXIDE	27	5%	1W
R514	1-249-397-11	CARBON	22	5%	1/4W
R515	1-249-425-11	CARBON	4.7K	5%	1/4W
R516	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R517	1-216-089-91	RES-CHIP	47K	5%	1/10W
R518	1-216-033-00	RES-CHIP	220	5%	1/10W
R519	1-216-037-00	RES-CHIP	330	5%	1/10W
R522	1-216-685-11	METAL CHIP	27K	0.50%	1/10W
R523	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R525	1-215-433-91	RES, FIXED METAL	3.3K	1%	1/4W
R526	1-216-079-00	RES-CHIP	18K	5%	1/10W
R527	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R528	1-216-073-91	RES-CHIP	10K	5%	1/10W
R529	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R530	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R532	1-216-295-91	SHORT			
R536	1-215-863-11	METAL OXIDE	100	5%	1W
R545	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R546	1-215-890-11	METAL OXIDE	470	5%	2W
R547	1-215-387-00	METAL	39	1%	1/4W
R548	1-260-318-71	CARBON	150	5%	1/2W
R549	1-260-314-11	CARBON	68	5%	1/2W
R550	1-247-887-00	CARBON	220K	5%	1/4W
R552	1-249-438-11	CARBON	56K	5%	1/4W

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R553	1-249-437-11	CARBON	47K	5%	1/4W
R555	1-249-437-11	CARBON	47K	5%	1/4W
R557	1-249-437-11	CARBON	47K	5%	1/4W
R559	1-249-437-11	CARBON	47K	5%	1/4W
R563	1-216-025-11	RES-CHIP	100	5%	1/10W
R564	1-216-049-11	RES-CHIP	1K	5%	1/10W
R565	1-216-025-11	RES-CHIP	100	5%	1/10W
R566	1-216-025-11	RES-CHIP	100	5%	1/10W
R567	1-216-025-11	RES-CHIP	100	5%	1/10W
R569	1-208-774-11	METAL CHIP	470	0.50%	1/10W
R575	1-216-041-00	RES-CHIP	470	5%	1/10W
R580	1-249-413-11	CARBON	470	5%	1/4W
R584	1-216-475-11	METAL OXIDE	120	5%	3W
R585	1-216-381-11	METAL OXIDE	0.22	5%	3W
R586	1-215-911-11	METAL OXIDE	100	5%	3W
R589	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R590	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R591	1-249-425-11	CARBON	4.7K	5%	1/4W
R592	1-249-425-11	CARBON	4.7K	5%	1/4W
R593	1-216-073-91	RES-CHIP	10K	5%	1/10W
R594	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R598	1-216-295-91	SHORT			
R601	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R602	1-249-389-11	CARBON	4.7	5%	1/4W
R603	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R604	1-219-759-11	CARBON	1M	5%	1/2W
R605	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R606	1-216-025-11	RES-CHIP	100	5%	1/10W
R607	1-215-481-00	METAL	330K	1%	1/4W
R608	1-208-820-11	METAL CHIP	39K	0.50%	1/10W
R609	1-219-754-11	CARBON	680K	5%	1/2W
R610	1-216-295-91	SHORT			
R611	1-247-889-00	CARBON	270K	5%	1/4W
R612	1-216-079-00	RES-CHIP	18K	5%	1/10W
R613	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R614	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R615	1-216-615-11	METAL CHIP	33	0.50%	1/10W
R616	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R617	1-216-295-91	SHORT			
R618	1-215-471-00	METAL	120K	1%	1/4W
R619	1-215-471-00	METAL	120K	1%	1/4W
R620	1-215-471-00	METAL	120K	1%	1/4W
R621	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R622	1-216-073-91	RES-CHIP	10K	5%	1/10W
R623	1-216-105-91	RES-CHIP	220K	5%	1/10W
R624	1-208-800-11	METAL CHIP	5.6K	0.50%	1/10W
R625	1-202-933-61	FUSIBLE	0.1	10%	1/2W
R626	1-215-927-00	METAL OXIDE	47K	5%	3W

REF.NO.	PART NO.	DESCRIPTION	VALUES		
R627	1-219-513-11	CARBON	4.7M	5%	1/2W
R628	1-247-897-11	CARBON	560K	5%	1/4W
R629	1-216-121-11	RES-CHIP	1M	5%	1/10W
R630	1-215-405-00	METAL	220	1%	1/4W
R631	1-208-782-11	METAL CHIP	1K	0.50%	1/10W
R632	1-208-836-11	METAL CHIP	180K	0.50%	1/10W
R633	1-208-818-11	METAL CHIP	33K	0.50%	1/10W
R634	1-216-049-11	RES-CHIP	1K	5%	1/10W
R635	1-208-832-11	METAL CHIP	120K	0.50%	1/10W
R636	1-249-381-11	CARBON	1	5%	1/4W
R637	1-215-893-11	METAL OXIDE	1.5K	5%	2W
R638	1-215-893-11	METAL OXIDE	1.5K	5%	2W
R639	1-211-962-11	METAL CHIP	27	0.50%	1/10W
R640	1-217-152-00	METAL	0.33	10%	2W
R641	1-217-152-00	METAL	0.33	10%	2W
R642	1-249-381-11	CARBON	1	5%	1/4W
R643	1-247-791-91	CARBON	22	5%	1/4W
R644	1-247-807-31	CARBON	100	5%	1/4W
R646	1-249-406-11	CARBON	120	5%	1/4W
R651	1-249-441-11	CARBON	100K	5%	1/4W
R652	1-215-917-11	METAL OXIDE	1K	5%	3W
R653	1-215-902-11	METAL OXIDE	47K	5%	2W
R657	1-249-417-11	CARBON	1K	5%	1/4W
R658	1-216-346-00	METAL OXIDE	0.56	5%	1W
R659	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R660	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R661	1-216-295-91	SHORT			
R664	1-215-902-11	METAL OXIDE	47K	5%	2W
R672	1-249-407-11	CARBON	150	5%	1/4W
R674	1-220-827-91	RESISTOR	560K	5%	1/2W
R676	1-215-467-00	METAL	82K	1%	1/4W
R677	1-216-025-11	RES-CHIP	100	5%	1/10W
R678	1-208-776-11	METAL CHIP	560	0.50%	1/10W
R679	1-247-895-91	CARBON	470K	5%	1/4W
R680	1-208-792-11	METAL CHIP	2.7K	0.50%	1/10W
R681	1-215-466-00	METAL	75K	1%	1/4W
R682	1-215-463-00	METAL	56K	1%	1/4W
R684	1-216-009-91	RES-CHIP	22	5%	1/10W
R685	1-216-073-91	RES-CHIP	10K	5%	1/10W
R686	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R687	1-216-689-11	RES-CHIP	39K	5%	1/10W
R693	1-219-513-11	CARBON	4.7M	5%	1/2W
R698	1-208-810-11	METAL CHIP	15K	0.50%	1/10W
R700	1-216-095-00	RES-CHIP	82K	5%	1/10W
R701	1-249-385-11	CARBON	2.2	5%	1/4W
R702	1-216-073-91	RES-CHIP	10K	5%	1/10W
R703	1-249-385-11	CARBON	2.2	5%	1/4W
R704	1-216-049-11	RES-CHIP	1K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION	VALUES		
R705	1-208-840-11	METAL CHIP	270K	0.50%	1/10W
R706	1-215-887-00	METAL OXIDE	150	5%	2W
R707	1-249-440-11	CARBON	82K	5%	1/4W
R709	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R710	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R711	1-208-805-11	METAL CHIP	9.1K	0.50%	1/10W
R712	1-249-425-11	CARBON	4.7K	5%	1/4W
R713	1-215-887-00	METAL OXIDE	150	5%	2W
R716	1-249-385-11	CARBON	2.2	5%	1/4W
R717	1-249-385-11	CARBON	2.2	5%	1/4W
R718	1-215-866-11	METAL OXIDE	330	5%	1W
R719	1-216-373-11	METAL OXIDE	2.2	5%	2W
R721	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R722	1-215-866-11	METAL OXIDE	330	5%	1W
R724	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R725	1-216-373-11	METAL OXIDE	2.2	5%	2W
R726	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R727	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R728	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R729	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R731	1-216-081-00	RES-CHIP	22K	5%	1/10W
R732	1-249-383-11	CARBON	1.5	5%	1/4W
R733	1-215-859-00	METAL OXIDE	22	5%	1W
R734	1-215-865-11	METAL OXIDE	220	5%	1W
R735	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
R737	1-216-059-00	RES-CHIP	2.7K	5%	1/10W
R738	1-216-069-00	RES-CHIP	6.8K	5%	1/10W
R739	1-215-457-00	METAL	33K	1%	1/4W
R740	1-216-089-91	RES-CHIP	47K	5%	1/10W
R741	1-216-049-11	RES-CHIP	1K	5%	1/10W
R742	1-208-799-11	METAL CHIP	5.1K	0.50%	1/10W
R743	1-208-770-11	METAL CHIP	330	0.50%	1/10W
R744	1-249-413-11	CARBON	470	5%	1/4W
R745	1-249-385-11	CARBON	2.2	5%	1/4W
R746	1-249-385-11	CARBON	2.2	5%	1/4W
R747	1-215-881-11	METAL OXIDE	15	5%	2W
R748	1-219-510-11	CARBON	470K	5%	1/2W
R749	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R754	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R755	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R758	1-249-385-11	CARBON	2.2	5%	1/4W
R759	1-249-385-11	CARBON	2.2	5%	1/4W
R760	1-216-093-91	RES-CHIP	68K	5%	1/10W
R901	1-247-807-31	CARBON	100	5%	1/4W
R902	1-216-073-91	RES-CHIP	10K	5%	1/10W
R903	1-208-830-11	METAL CHIP	100K	0.50%	1/10W
R904	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R905	1-247-895-91	CARBON	470K	5%	1/4W
R906	1-249-429-11	CARBON	10K	5%	1/4W
R908	1-249-429-11	CARBON	10K	5%	1/4W
R909	1-219-727-11	METAL	68	5%	10W
R910	1-215-475-00	METAL	180K	1%	1/4W
R911	1-249-401-11	CARBON	47	5%	1/4W
R912	1-249-417-11	CARBON	1K	5%	1/4W
R913	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R915	1-249-397-11	CARBON	22	5%	1/4W
R916	1-249-401-11	CARBON	47	5%	1/4W
R917	1-249-385-11	CARBON	2.2	5%	1/4W
R918	1-214-935-00	METAL	820K	1%	1/2W
R919	1-216-073-91	RES-CHIP	10K	5%	1/10W
R920	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R921	1-249-425-11	CARBON	4.7K	5%	1/4W
R923	1-215-467-00	METAL	82K	1%	1/4W
R931	1-219-748-11	CARBON	4.7K	5%	1/2W
R932	1-208-796-11	METAL CHIP	3.9K	0.50%	1/10W
R933	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R934	1-260-300-11	CARBON	4.7	5%	1/2W
R935	1-215-433-00	METAL	3.3K	1%	1/4W
R936	1-219-398-51	METAL	2.2M	5%	1W
R937	1-216-049-11	RES-CHIP	1K	5%	1/10W
R938	1-216-111-00	RES-CHIP	390K	5%	1/10W
R939	1-216-095-00	RES-CHIP	82K	5%	1/10W
R940	1-216-109-00	RES-CHIP	330K	5%	1/10W
R941	1-219-621-91	METAL	22M	10%	1/4W
R942	1-216-121-11	RES-CHIP	1M	5%	1/10W
R943	1-216-097-11	RES-CHIP	100K	5%	1/10W
R944	1-216-049-11	RES-CHIP	1K	5%	1/10W
R945	1-216-025-11	RES-CHIP	100	5%	1/10W
R946	1-216-073-91	RES-CHIP	10K	5%	1/10W
R950	1-216-049-11	RES-CHIP	1K	5%	1/10W
R951	1-216-121-11	RES-CHIP	1M	5%	1/10W
R952	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R953	1-216-129-00	RES-CHIP	2.2M	5%	1/10W
R954	1-218-179-11	RES-CHIP	10M	5%	1/10W
R955	1-218-179-11	RES-CHIP	10M	5%	1/10W
R1601	1-249-385-11	CARBON	2.2	5%	1/4W
R1602	1-249-385-11	CARBON	2.2	5%	1/4W
R1621	1-216-298-00	RES-CHIP	2.2	5%	1/10W
R1624	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1631	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R1635	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R1636	1-215-859-00	METAL OXIDE	22	5%	1W
R1640	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R1644	1-215-457-00	METAL	33K	1%	1/4W

NOTE: The components identified by shading and ⚠ mark are critical for safety. Replace only with part number specified.

A component identified by this ⧓ symbol indicates that it has been carefully factory-selected to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

D DA

	REF.NO.	PART NO.	DESCRIPTION	VALUES		
		FUSIBLE RESISTOR				
	RA753	1-249-393-11	CARBON	10	5%	1/4W
		VARIABLE RESISTOR				
⧓	RV901	1-241-767-21	RES, ADJ, CERMET 100K			
		RELAY				
⚠	RY601	1-755-067-21	RELAY, AC POWER			
⚠	RY602	1-755-318-11	RELAY, POWER			
	RY603	1-755-013-11	RELAY			
		SWITCH				
	S501	1-692-465-11	SWITCH SLIDE			
⚠	S602	1-771-757-12	SWITCH PUSH (1 KEY)			
		SPARK GAP				
	SG603	1-533-982-21	GAP, SPARK			
	SG902	1-519-422-11	GAP, SPARK			
	SG903	1-519-422-11	GAP, SPARK			
		TRANSFORMER				
	T501	1-437-459-11	TRANSFORMER, HORIZONTAL DRIVE			
	T503	1-435-140-21	TRANSFORMER, FERRITE (LCT)			
	T509	1-437-458-11	TRANSFORMER,HORIZONTAL CENTRIN			
⚠	T602	1-437-460-11	TRANSFORMER, CONVERTER			
	T701	1-435-129-11	TRANSFORMER, FERRITE (DFT)			
⚠	T901	1-453-377-11	FBT ASSY NX-4703/VQM4			
		THERMISTOR				
	TH401	1-807-970-11	THERMISTOR			
	TH600	1-809-260-11	THERMISTOR, NEC (NTH22D6R0QA)			
	TH601	1-803-540-11	THERMISTOR			
		VARISTOR				
	VA601	1-801-268-51	VARISTOR	ERZV14D471		

DA

	REF.NO.	PART NO.	DESCRIPTION	VALUES		
	*	**A-1333-141-A**	**DA BOARD, MOUNTED**			
		CAPACITOR				
	C1101	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1102	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1103	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1104	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1105	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1108	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1109	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1110	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1111	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1112	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1113	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1114	1-163-017-00	CERAMIC CHIP	.0047μF	10%	50V
	C1115	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1116	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1117	1-163-019-00	CERAMIC CHIP	0.0068μF	10%	50V
	C1118	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1119	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1120	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C1121	1-163-019-00	CERAMIC CHIP	0.0068μF	10%	50V
	C1122	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1123	1-163-809-11	CERAMIC CHIP	0.047μF	10%	25V
	C1124	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C1125	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1126	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1127	1-125-838-11	CERAMIC CHIP	2.2μF	10%	6.3V
	C1128	1-126-246-11	ELECT CHIP	220μF	20%	4V
	C1129	1-163-007-11	CERAMIC CHIP	680pF	10%	50V
	C1130	1-164-492-11	CERAMIC CHIP	0.15μF	10%	16V
	C1131	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1132	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	C1133	1-126-246-11	ELECT CHIP	220μF	20%	4V
	C1137	1-126-205-11	ELECT CHIP	47μF	20%	6.3V
	C1138	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
	C1139	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
	C1140	1-163-251-11	CERAMIC CHIP	100pF	5%	50V
		DIODE				
	D1104	8-719-027-76	DIODE 1SS357-TPH3			
	D1105	8-719-067-40	DIODE STZ6.8N-T146			
	D1106	8-719-067-40	DIODE STZ6.8N-T146			
	D1107	8-719-067-40	DIODE STZ6.8N-T146			
		FERRITE BEAD				
	FB1101	1-543-963-22	FERRITE	0μH		
		IC				
	IC1101	8-759-697-78	IC CXD9563Q			
	IC1102	8-759-701-01	IC NJM2904M(TE2)			

DA N

REF.NO.	PART NO.	DESCRIPTION	VALUES		
	RESISTOR				
R1101	1-216-025-11	RES-CHIP	100	5%	1/10W
R1102	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R1103	1-216-025-11	RES-CHIP	100	5%	1/10W
R1106	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R1108	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1109	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
R1110	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
R1111	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
R1112	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1113	1-208-796-11	METAL CHIP	3.9K	0.50%	1/10W
R1114	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1115	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R1116	1-216-655-11	METAL CHIP	1.5K	0.50%	1/10W
R1118	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1119	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1122	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R1123	1-208-787-11	METAL CHIP	1.6K	0.50%	1/10W
R1124	1-208-774-11	METAL CHIP	470	0.50%	1/10W
R1125	1-208-790-11	METAL CHIP	2.2K	0.50%	1/10W
R1126	1-216-642-11	METAL CHIP	430	0.50%	1/10W
R1127	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1128	1-216-105-91	RES-CHIP	220K	5%	1/10W
R1129	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R1131	1-216-025-11	RES-CHIP	100	5%	1/10W
R1132	1-216-025-11	RES-CHIP	100	5%	1/10W
R1133	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1134	1-208-794-11	METAL CHIP	3.3K	0.50%	1/10W
R1135	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1136	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1137	1-208-836-11	METAL CHIP	180K	0.50%	1/10W
R1139	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
R1141	1-216-025-11	RES-CHIP	100	5%	1/10W
R1142	1-216-295-91	SHORT			
	RESISTOR BRIDGE				
RB1101	1-233-576-11	RES, CHIP NETWORK	100		
RB1102	1-233-412-11	RES, CHIP NETWORK	1.0K	-3216	
RB1103	1-233-412-11	RES, CHIP NETWORK	1.0K	-3216	
RB1104	1-233-576-11	RES, CHIP NETWORK	100		
RB1105	1-233-576-11	RES, CHIP NETWORK	100		
RB1106	1-233-412-11	RES, CHIP NETWORK	1.0K	-3216	

N

REF.NO.	PART NO.	DESCRIPTION	VALUES		
*	**A-1391-154-A**	**N BOARD, MOUNTED**			
	CAPACITOR				
C1001	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1002	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1004	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1005	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1014	1-126-205-11	ELECT CHIP	47μF	20%	6.3V
C1015	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1016	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1017	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1018	1-163-220-11	CERAMIC CHIP	3pF	0.25pF	50V
C1019	1-163-235-11	CERAMIC CHIP	22pF	5%	50V
C1020	1-126-206-11	ELECT CHIP	100μF	20%	6.3V
C1021	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1022	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1023	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1027	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1028	1-164-004-11	CERAMIC CHIP	0.1μF	10%	25V
C1029	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
C1030	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V
	DIODE				
D1001	8-719-404-50	DIODE MA111-TX			
	FERRITE BEAD				
FB1001	1-543-963-22	FERRITE	0μH		
	IC				
IC1001	6-700-872-01	IC TMP91CW18F-2C43(Z)			
IC1002	8-759-420-77	IC PST574CMT-T1			
IC1003	8-759-641-86	IC BR24C16F-E2			
	TRANSISTOR				
Q1001	8-729-029-06	TRANSISTOR DTC124EUA-T106			
	RESISTOR				
R1001	1-216-125-00	RES-CHIP	1.5M	5%	1/10W
R1003	1-216-025-11	RES-CHIP	100	5%	1/10W
R1004	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1005	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1006	1-216-065-91	RES-CHIP	4.7K	5%	1/10W

DA

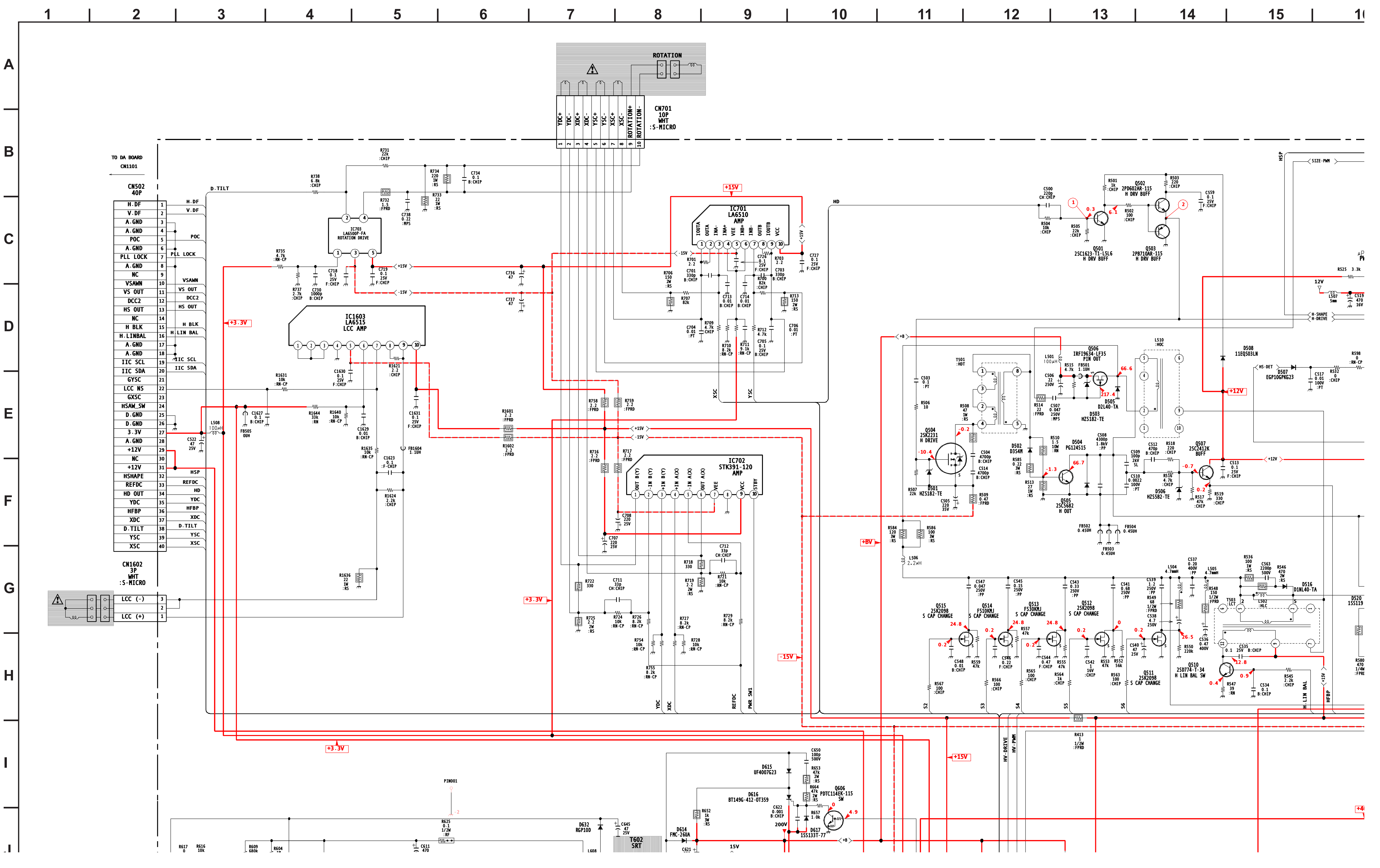
REF.NO.	PART NO.	DESCRIPTION	VALUES		
R1008	1-216-025-11	RES-CHIP	100	5%	1/10W
R1009	1-216-025-11	RES-CHIP	100	5%	1/10W
R1010	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1011	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1012	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1014	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1015	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1016	1-216-025-11	RES-CHIP	100	5%	1/10W
R1017	1-216-049-11	RES-CHIP	1K	5%	1/10W
R1018	1-216-017-91	RES-CHIP	47	5%	1/10W
R1019	1-216-017-91	RES-CHIP	47	5%	1/10W
R1020	1-216-017-91	RES-CHIP	47	5%	1/10W
R1021	1-216-017-91	RES-CHIP	47	5%	1/10W
R1022	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1023	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1040	1-216-025-11	RES-CHIP	100	5%	1/10W
R1041	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
R1042	1-216-073-91	RES-CHIP	10K	5%	1/10W
R1043	1-216-121-11	RES-CHIP	1M	5%	1/10W
R1044	1-216-121-11	RES-CHIP	1M	5%	1/10W
	RESISTOR BRIDGE				
RB1001	1-233-576-11	RES, CHIP NETWORK	100		
RB1002	1-233-576-11	RES, CHIP NETWORK	100		
RB1003	1-233-576-11	RES, CHIP NETWORK	100		
RB1004	1-233-576-11	RES, CHIP NETWORK	100		
RB1005	1-233-576-11	RES, CHIP NETWORK	100		
RB1006	1-233-576-11	RES, CHIP NETWORK	100		
RB1007	1-233-576-11	RES, CHIP NETWORK	100		
RB1009	1-233-576-11	RES, CHIP NETWORK	100		
	CRYSTAL				
X1001	1-795-044-21	VIBRATOR, CRYSTAL			

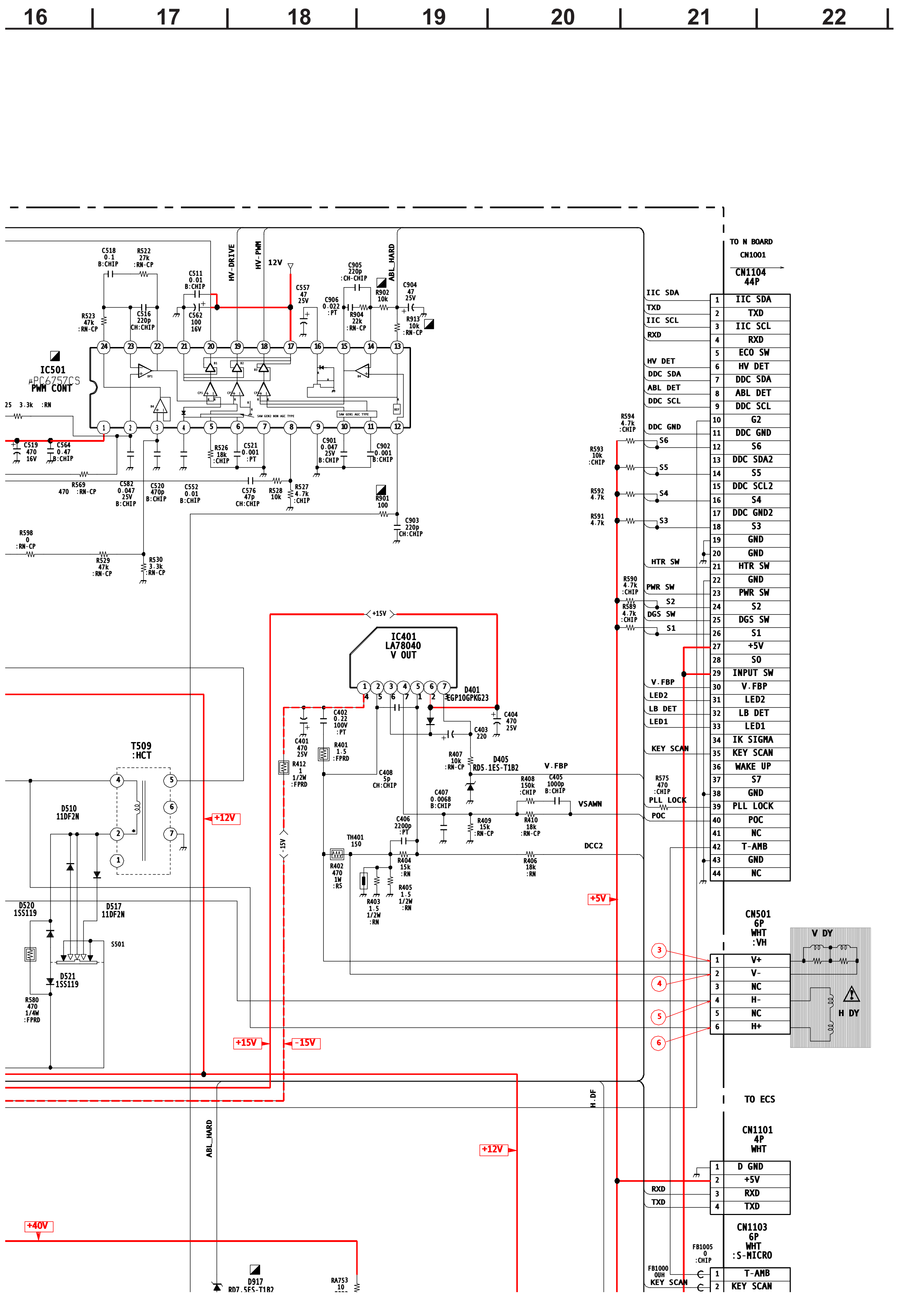
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SONY CORPORATION
Sony Technology Center
Technical Services
Service Promotion Department

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D BOARD SCHEMATIC DIAGRAM





D BOARD IC VOLTAGE LIST

IC401

pin	volt
1	1.6
2	14.3
3	-13.3
4	-14.4
5	0.3
6	13.8
7	1.6

IC501

pin	volt
1	12.1
2	4.7
3	4
4	6.3
5	8.8
6	6.2
7	GND
8	0.2
9	GND
10	8.4
11	4.6
12	5.8
13	5.8
14	5.8
15	7.1
16	11.6
17	12.1
18	8.8
19	9.4
20	8.2
21	0
22	4.7
23	4
24	4

IC601

pin	volt
1	5.9
2	5.9
3	GND

IC603

pin	volt
1	148.1
2	0.6
3	NC
4	2.9
5	0.0
6	12.6
7	12.3
8	2.5
9	2.8
10	NC
11	GND
12	NC
13	0.5
14	5.4

IC604

pin	volt
1	15.0
2	GND
3	12.0

IC605

pin	volt
1	4.7
2	5.9
3	GND
4	5.0
5	NC

IC607

pin	volt
1	5.6
2	4.6
3	3.4
4	12.7

IC608

pin	volt
1	3.1
2	GND
3	2.5

IC610

pin	volt
1	3.4
2	6.2
3	GND
4	3.3
5	1.2

IC611

pin	volt
1	0.0
2	1.2
3	0.5
4	GND
5	5.0
6	3.2
7	1.2
8	12.9

IC701

pin	volt
1	1.5
2	1.5
3	1.5
4	1.5
5	-15.0
6	1.5
7	1.5
8	0.2
9	0.2
10	15.0

IC702

pin	volt
1	0.0
2	0.8
3	0.8
4	0.8
5	0.8
6	-0.1
7	-15.0
8	GND
9	15.0
10	4.8

IC703

pin	volt
1	1.2
2	1.2
3	-15.0
4	0.2
5	15.0

IC902

pin	volt
1	NC
2	NC
3	GND
4	GND
5	3.8
6	3.8
7	8.6
8	15

IC1603

pin	volt
1	NC
2	NC
3	NC
4	GND
5	-14.8
6	0.7
7	0.8
8	-4.3
9	-4.3
10	15.0

All voltages are in V

J

K

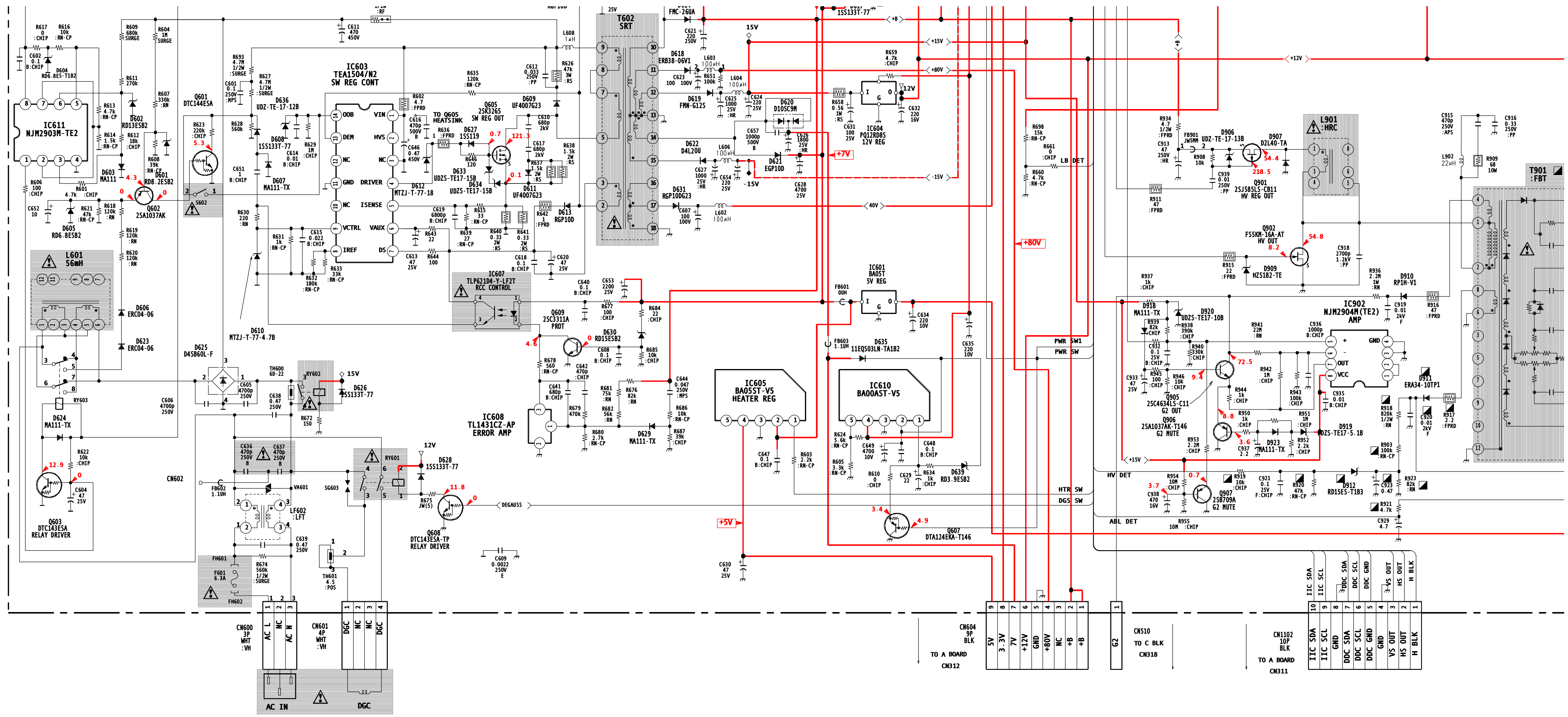
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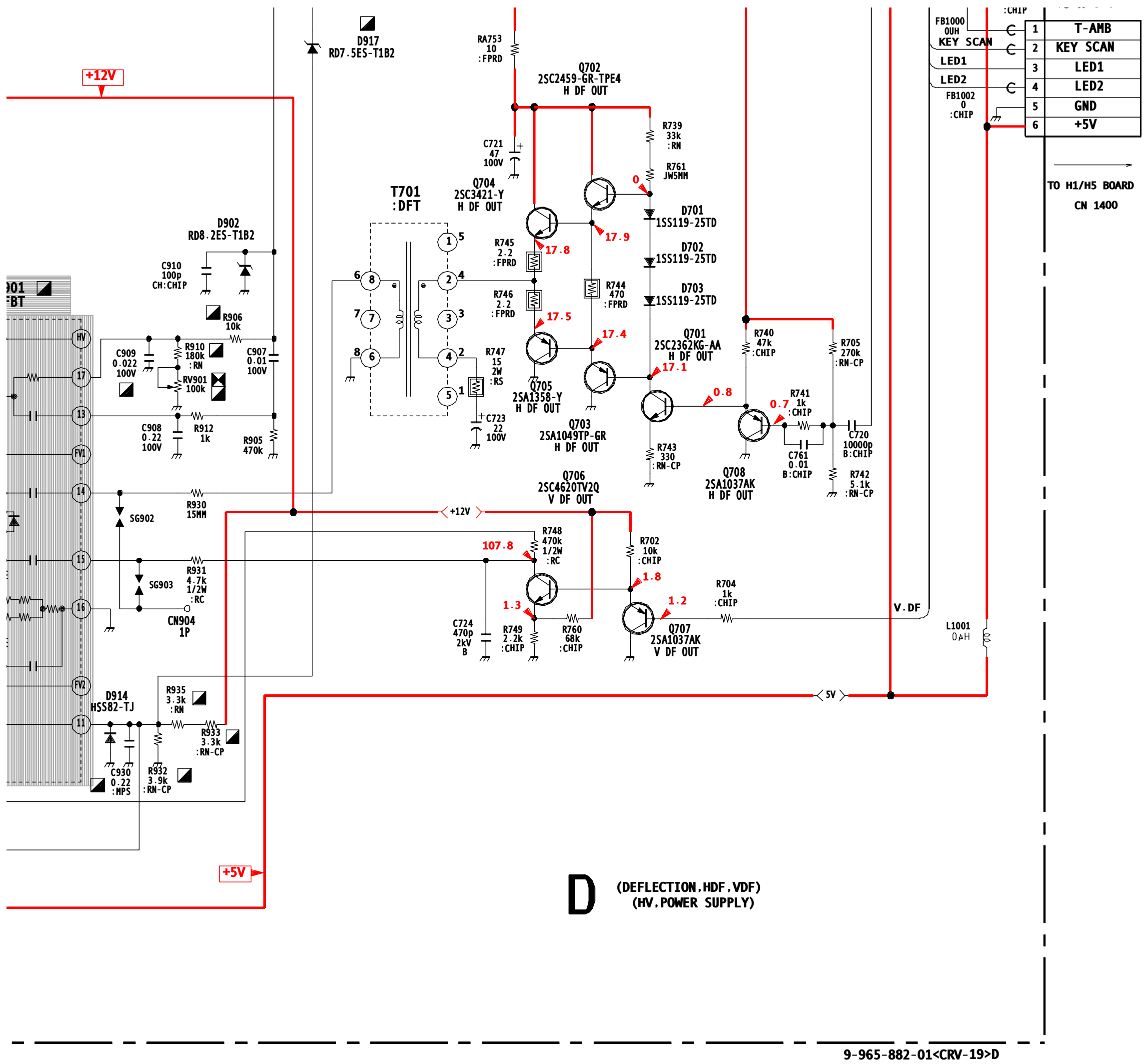
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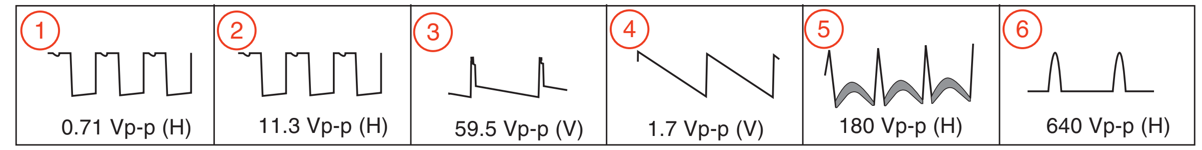
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P


IC611 NJM2903M-TE2
IC603 TEA1504/N2 SW REG CONT
T602 SRT
IC604 PQ12RD8S 12V REG
L601 56mH
IC607 TLP621D4-Y-LF2T RCC CONTROL
IC608 TL1431CZ-AP ERROR AMP
Q609 2SC3311A PROT
IC601 BA05T 5V REG
IC605 BA05ST-V5 HEATER REG
IC610 BA00AST-V5
IC902 NJM2904M(TE2) AMP
L901 :HRC
T901 :FBT
Q603 DTC143ESA RELAY DRIVER
Q608 DTC143ESA-TP RELAY DRIVER
Q607 DTA124EKA-T146
Q605 2SK3265 SW REG OUT
Q901 2SJ585LS-CB11 HV REG OUT
Q902 FS5KM-16A-AT HV OUT
Q905 2SC4634LS-C11 G2 OUT
Q906 2SA1037AK-T146 G2 MUTE
Q907 2SB709A G2 MUTE
CN600 3P WHT :VH
CN601 4P WHT :VH
AC IN
DGC
CN604 9P BLK TO A BOARD CN312
5V
3.3V
7V
+12V
GND
+80V
NC
+B
+B
CN510 TO C BLK CN318
G2
CN1102 10P BLK TO A BOARD CN311
IIC SDA
IIC SCL
GND
DDC SDA
DDC SCL
DDC GND
GND
VS OUT
HS OUT
H BLK

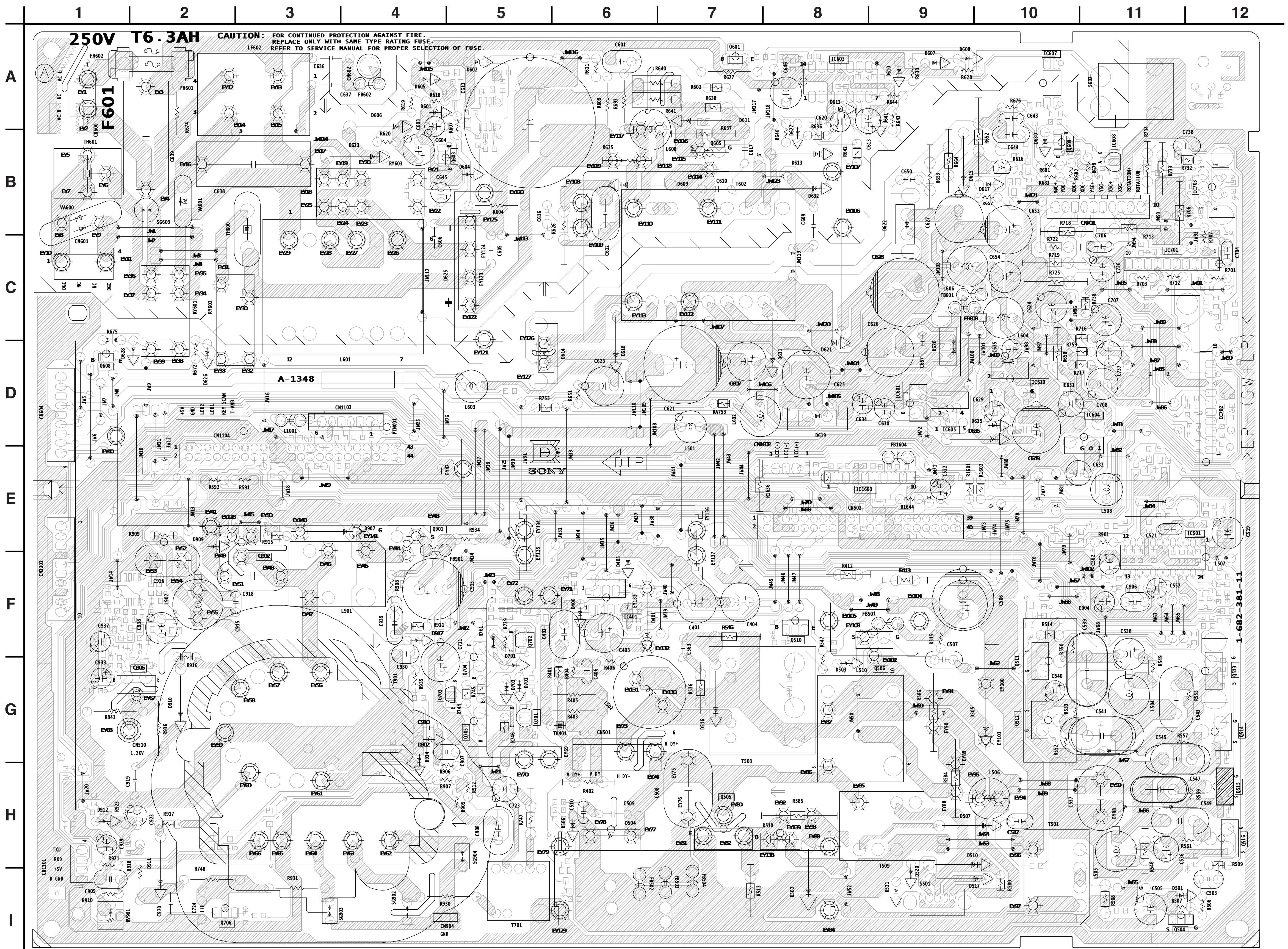


D BOARD WAVEFORMS

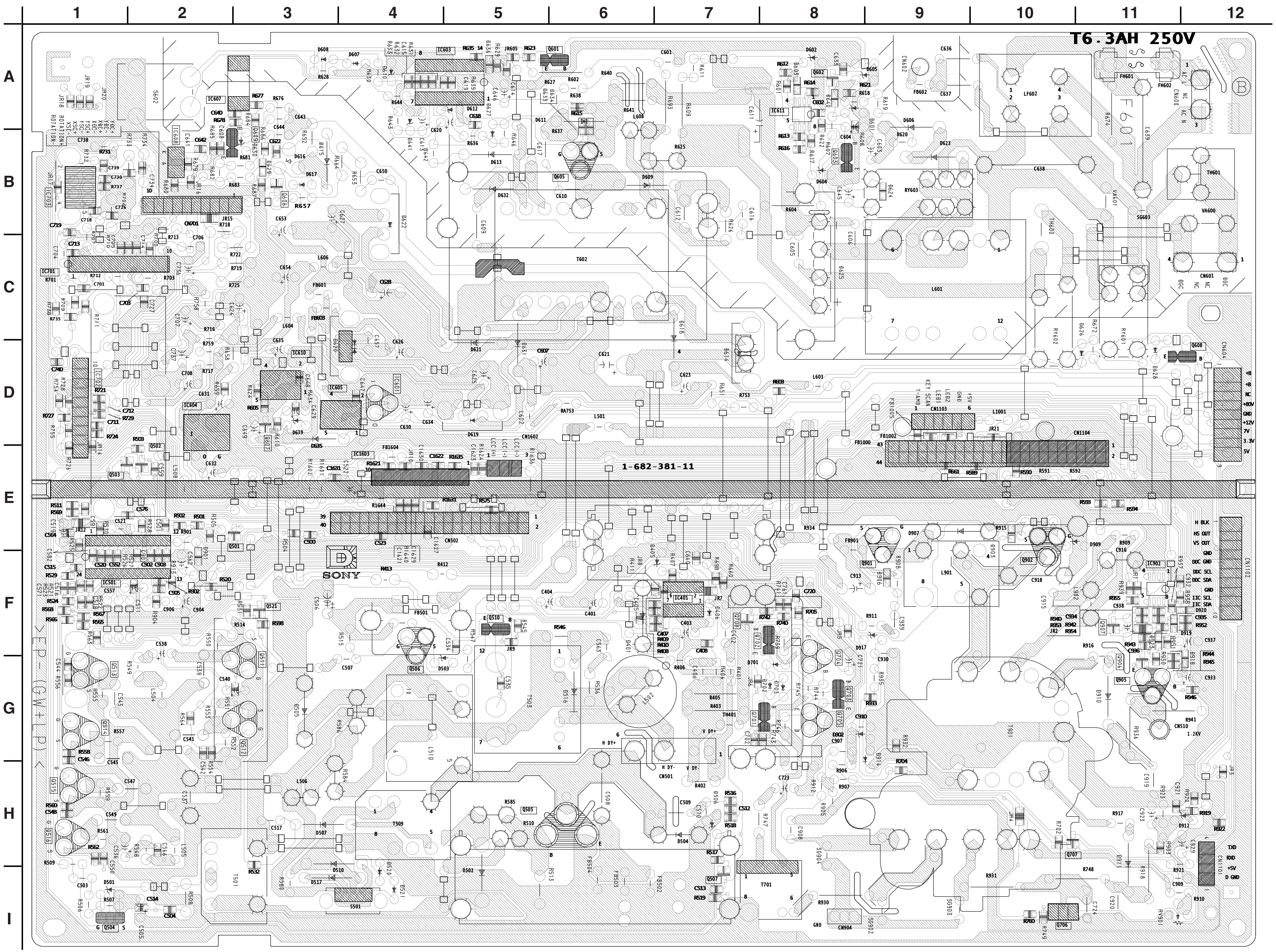


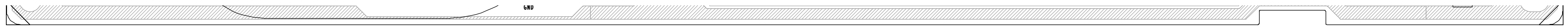
D

COMPONENT SIDE



CONDUCTOR SIDE





D BOARD LOCATOR LIST

DIODE			DIODE			TRANSISTOR		
	COMP	COND		COMP	COND		COMP	COND
D401	F-6	--	D630	B-10	--	Q501	--	E-2
D405	F-6	--	D631	D-8	--	Q502	--	E-2
D501	I-11	--	D632	B-8	--	Q503	--	E-1
D502	I-8	--	D633	--	A-5	Q504	--	I-1
D503	G-8	--	D634	--	A-5	Q505	--	H-5
D504	H-6	--	D635	D-10	--	Q506	--	F-4
D505	G-9	--	D636	--	A-5	Q507	--	H-7
D506	H-5	--	D639	D-10	--	Q510	--	F-5
D507	H-9	--	D701	F-5	--	Q511	F-10	--
D510	H-9	--	D702	F-5	--	Q512	G-10	--
D516	G-7	--	D703	F-5	--	Q513	G-12	--
D517	I-9	--	D902	G-4	--	Q514	G-12	--
D520	H-9	--	D906	--	F-9	Q515	H-12	--
D521	H-9	--	D907	E-4	--	Q601	A-7	--
D601	A-4	--	D909	E-2	--	Q602	--	A-8
D602	A-5	--	D910	G-2	--	Q603	B-5	--
D603	--	A-8	D911	H-2	--	Q605	B-7	--
D605	A-4	--	D912	H-1	--	Q607	--	D-3
D606	A-4	--	D914	G-4	--	Q608	D-1	--
D608	A-9	--	D917	F-4	--	Q609	B-10	--
D609	B-7	--	D918	--	F-12	Q701	G-5	--
D610	A-9	--	D919	--	F-12	Q702	F-5	--
D611	B-7	--	D920	--	F-12	Q703	G-5	--
D612	A-8	--	D923	--	F-11	Q704	G-5	--
D613	B-8	--	IC			Q705	G-5	--
D614	D-5	--		COMP	COND	Q706	I-2	--
D615	B-9	--	IC401	F-6	--	Q707	--	H-10
D616	B-10	--	IC501	E-11	--	Q708	--	F-7
D617	B-10	--	IC601	D-9	--	Q901	--	E-9
D618	D-6	--	IC603	A-8	--	Q902	--	E-10
D619	D-8	--	IC604	D-10	--	Q905	--	G-11
D620	D-9	--	IC605	D-9	--	Q906	--	F-11
D621	D-8	--	IC607	--	A-2	Q907	--	F-11
D622	C-9	--	IC608	B-11	--			
D623	B-4	--	IC610	D-10	--			
D624	--	B-9	IC611	--	A-8			
D625	C-5	--	IC701	C-11	--			
D626	D-2	--	IC702	D-12	--			
D627	B-8	--	IC703	B-12	--			
D628	D-2	--	IC902	--	F-11			
D629	--	B-3	IC1603	--	E-4			

SONY®

4-084-759-**11** (1)

Trinitron® Color Computer Display

CPD-G410R

Owner's Record

The model and serial numbers are located at the rear of the unit. Record these numbers in the spaces provided below. Refer to them whenever you call upon your dealer regarding this product.
Model No.____________ Serial No. ____________

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

Dangerously high voltages are present inside the unit. Do not open the cabinet. Refer servicing to qualified personnel only.

FCC Notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
– Consult the dealer or an experienced radio/TV technician for help.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

IMPORTANTE

Para prevenir cualquier mal funcionamiento y evitar daños, por favor, lea detalladamente este manual de instrucciones antes de conectar y operar este equipo.

INFORMATION
This product complies with Swedish National Council for Metrology (MPR) standards issued in December 1990 (MPR II) for very low frequency (VLF) and extremely low frequency (ELF).

INFORMATION
Ce produit est conforme aux normes du Swedish National Council for Metrology de décembre 1990 (MPR II) en ce qui concerne les fréquences très basses (VLF) et extremement basses (ELF).

INFORMACIÓN
Este producto cumple las normas del Consejo Nacional Sueco para Metrología (MPR) emitidas en diciembre de 1990 (MPR II) para frecuencias muy bajas (VLF) y frecuencias extremadamente bajas (ELF).

NOTICE

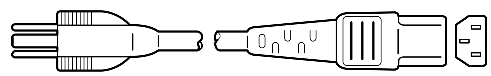
This notice is applicable for USA/Canada only.
If shipped to USA/Canada, install only a UL LISTED/CSA LABELLED power supply cord meeting the following specifications:
SPECIFICATIONS

Plug Type	Nema-Plug 5-15p
Cord	Type SVT or SJT, minimum 3 × 18 AWG
Length	Maximum 15 feet
Rating	Minimum 7 A, 125 V

NOTICE

Cette notice s'applique aux Etats-Unis et au Canada uniquement.
Si cet appareil est export* aux Etats-Unis ou au Canada, utiliser le cordon d'alimentation portant la mention UL LISTED/CSA LABELLED et remplissant les conditions suivantes:
SPECIFICATIONS

Type de fiche	Fiche Nema 5-15 broches
Cordon	Type SVT ou SJT, minimum 3 × 18 AWG
Longueur	Maximum 15 pieds
Tension	Minimum 7 A, 125 V



As an ENERGY STAR Partner, Sony Corporataion has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

This monitor complies with the TCO'99 guidelines.

If you have any questions about this product, you may call:
Sony Customer Information Center
1-800-222-SONY (7669)
or write to:
Sony Customer Information Center
1 Sony Drive, Mail Drop #T1-11, Park Ridge, NJ 07656

Declaration of Conformity

Trade Name:	SONY
Model No.:	CPD-G410R
Responsible Party:	Sony Electronics Inc.
Address:	680 Kinderkamack Road, Oradell, NJ 07649 USA
Telephone No.:	201-930-6972

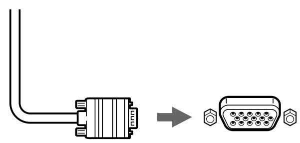
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Table of Contents

Setup

1 Connecting your monitor to your computer

■ To connect to the HD15 input connector



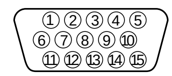
Video signal cable of the monitor

to HD15 of the connecting computer

Connecting to a Macintosh or compatible computer

When connecting this monitor to a Power Mac G3/G4 computer, use the Macintosh adapter (not supplied) if necessary.

HD15 input connectors



Pin No.	Signal	Pin No.	Signal
1	Red	9	DDC + 5V*
2	Green (Sync on Green)	10	Ground
3	Blue	11	ID (Ground)
4	ID (Ground)	12	Bi-Directional Data (SDA)*
5	CPU Sense	13	H. Sync
6	Red Ground	14	V. Sync
7	Green Ground	15	Data Clock (SCL)*
8	Blue Ground		

* DDC (Display Data Channel) is a standard of VESA.

2 Turning on the monitor and computer

1 Connect the power cord to the monitor and press the ⏻ (power) switch to turn on the monitor.

2 Turn on the computer.

No need for specific drivers

This monitor complies with the "DDC" Plug & Play standard and automatically detects all the monitor's information. No specific driver needs to be installed to the computer.
The first time you turn on your PC after connecting the monitor, the setup Wizard may appear on the screen. In this case, follow the on-screen instructions. The Plug & Play monitor is automatically selected so that you can use this monitor.

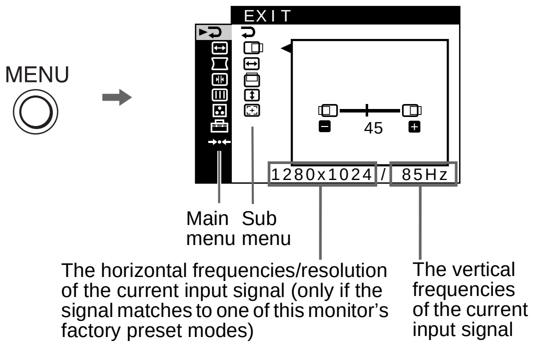
Notes

- Do not touch the pins of the video signal cable connector.
- Check the alignment of the HD15 connector to prevent bending the pins of the video signal cable connector.

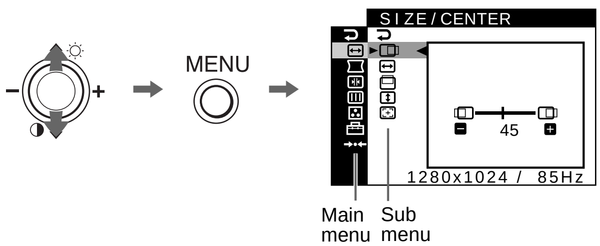
Adjustments

Navigating the menu

1 Press the MENU button to display the main menu.



2 Move the control button ↓/↑ to highlight the main menu you want to adjust and press the control button.



3 Move the control button ↓/↑ to highlight the sub menu you want to adjust. Then move the control button –/+ to make adjustments.

To close the menu

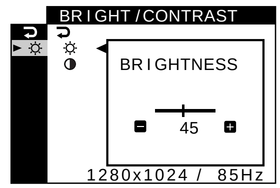
Press MENU button twice to return to the main menu. The default-selected item is ⮐. Each time you select ⮐ and press MENU button, the menu exits. If no buttons are pressed, the menu closes automatically after about 30 seconds.

Adjusting the brightness and contrast

Brightness and contrast adjustments are made using a separate BRIGHT/CONTRAST menu. These adjustments are effective for all input signals.

1 Move the control button ↑ (☼)/↓ (◑) to display the BRIGHT/CONTRAST menu.

2 Move the control button ↓/↑ to select the brightness (☼) or contrast (◑). Then move the control button –/+ to make adjustments.



Note

If you selected the sRGB mode in the (COLOR MODE) of the (COLOR) menu, the ☼ / ◑ (BRIGHT/CONTRAST) menu for the sRGB mode appears and you cannot adjust the brightness nor the contrast on this screen. For more information about using the sRGB mode, see sRGB mode in the (COLOR) menu.

On-Screen menu adjustments

Main menu icons and adjustment items	Sub menu icons and adjustment items	
Adjusting the size or centering of the picture*1		Horizontal position
		Horizontal size
		Vertical position
		Vertical size
		Auto Size Center
Adjusting the shape of the picture		Rotating the picture
		Expanding or contracting the picture sides*1
		Shifting the picture sides to the left or right*1
		Adjusting the picture width at the top of the screen*1
		Shifting the picture to the left or right at the top of the screen*1
		RESET: Returns all settings to their factory default settings.
Adjusting the convergence*2		Horizontally shifts red or blue shadows
		Vertically shifts red or blue shadows
	T	Vertically shifts red or blue shadows at the top of the screen
	B	Vertically shifts red or blue shadows at the bottom of the screen
		RESET: Returns all settings to their factory default settings.
Adjusting the picture quality		DEGAUSS: demagnetizes the monitor.
		CANCEL MOIRE*4: adjusts the degree of moire cancellation until the moire is at a minimum.*1
Adjusting the color of the picture	See ": To adjust the color of the picture".	
Additional settings		Protecting adjustment data (CONTROL LOCK)*5
		Selecting the on-screen menu language/Confirming the monitor's information LANGUAGE/ INFORMATION*3
		Changing the menu's position for horizontal adjustment
		Changing the menu's position for vertical adjustment
Resetting the adjustments	1*1	Resetting all the adjustment data for the current input signal.*6 Select "OK".
	2*2	Resetting all of the adjustment data for all input signals. Select "OK".

*1 This adjustment is effective for the current input signal.
*2 This adjustment is effective for all input signals.
*3 Language Menu

- **ENGLISH**
- **FRANÇAIS: French**
- **DEUTSCH: German**
- **ESPAÑOL: Spanish**
- **ITALIANO: Italian**
- **NEDERLANDS: Dutch**
- **SVENSKA: Swedish**
- РУССКИЙ: **Russian**
- 日本語: **Japanese**

*4 Example of Moire



*5 Only the (power) switch, and (CONTROL LOCK) menu will operate.
*6 The menu items , , and are not reset by this method.

US

: To adjust the color of the picture

The COLOR settings allow you to adjust the picture's color temperature by changing the color level of the white color field. Colors appear reddish if the temperature is low, and bluish if the temperature is high. This adjustment is useful for matching the monitor's color to a printed picture's colors.
Select one of the color temperature setting modes from among 4 modes; PRESET, VARIABLE, EXPERT and sRGB on (COLOR MODE) in the (COLOR) menu.

■ PRESET (Default setting)

You can select the preset color temperature from 5000K, 6500K, or 9300K. The default setting is 9300K.

■ VARIABLE

You can adjust the color temperature from 5000K to 11000K.

■ EXPERT

You can make additional fine adjustments to the color by selecting this mode. GAIN ( ) adjusts the bright areas of the screen, while BIAS ( ) adjusts the dark areas of the screen.

Select	for
R	R (Red) BIAS
G	G (Green) BIAS
B	B (Blue) BIAS
	RESET*

Select	for
R	R (Red) GAIN
G	G (Green) GAIN
B	B (Blue) GAIN

* Returns all the settings in the Expert mode to their factory settings.

■ sRGB

The sRGB color setting is an industry standard color space protocol designed to correlate the colors displayed on the monitor and those printed. In order to display the sRGB colors correctly ($\gamma = 2.2$, 6500K), select the sRGB mode and your connected computer to the sRGB profiles. If you select sRGB, you cannot operate the BRIGHT/CONTRAST menu adjustments.

Note

Confirm that the brightness ( ) and contrast ( ) values are adjusted respectively to the numbers to be set in the sRGB mode shown in the BRIGHT/CONTRAST menu. If not, select 1 in the (RESET) menu.

Troubleshooting

■ No picture

If the ⏻ (power) indicator is not lit

- Check that the power cord is properly connected.
- Check that the ⏻ (power) switch is in the “on” position.

The ⏻ (power) indicator is orange

- Check that the video signal cable is properly connected and all plugs are firmly seated in their sockets.
- Check that the HD15 video input connector’s pins are not bent or pushed in.
- Check that the computer’s power is “on”.
- The computer is in power saving mode. Try pressing any key on the computer keyboard or moving the mouse.
- Check that the graphic board is completely seated in the proper bus slot.

If the ⏻ (power) indicator is green or flashing orange

- Use the Self-diagnosis function.

■ Picture flickers, bounces, oscillates, or is scrambled

- Isolate and eliminate any potential sources of electric or magnetic fields such as other monitors, laser printers, electric fans, fluorescent lighting, or televisions.
- Move the monitor away from power lines or place a magnetic shield near the monitor.
- Try plugging the monitor into a different AC outlet, preferably on a different circuit.
- Try turning the monitor 90° to the left or right.
- Check your graphics board manual for the proper monitor setting.
- Confirm that the graphics mode and the frequency of the input signal are supported by this monitor (see “Preset mode timing table” on page i). Even if the frequency is within the proper range, some graphics board may have a sync pulse that is too narrow for the monitor to sync correctly.
- Adjust the computer’s refresh rate (vertical frequency) to obtain the best possible picture.

■ Picture is fuzzy

- Adjust the brightness, contrast.
- Degauss the monitor.*
- Adjust the degree of moire cancellation until the moire is minimal, or set CANCEL MOIRE to OFF.

■ Picture is ghosting

- Eliminate the use of video cable extensions and/or video switch boxes.
- Check that all plugs are firmly seated in their sockets.

■ Picture is not centered or sized properly

- Perform the Auto Size Center function.
- Adjust the size or centering. Note that with some input signals and/or graphics board the periphery of the screen is not fully utilized.
- Just after turning on the power switch, the size/center may take a while to adjust properly.

■ Edges of the image are curved

- Adjust the geometry.

■ Wavy or elliptical pattern (moire) is visible

- Adjust the degree of moire cancellation until the moire is minimal.
- Change your desktop pattern.

■ Color is not uniform

- Degauss the monitor.* If you place equipment that generates a magnetic field, such as a speaker, near the monitor, or if you change the direction the monitor faces, color may lose uniformity.

■ White does not look white

- Adjust the color temperature.

■ Monitor buttons do not operate (appears on the screen)

- If the control lock is set to ON, set it to OFF.

■ Letters and lines show red or blue shadows at the edges

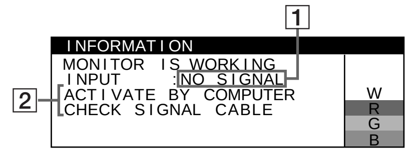
- Adjust the convergence.

■ A hum is heard right after the power is turned on

- This is the sound of the auto-degauss cycle. When the power is turned on, the monitor is automatically degaussed for a few seconds.

* If a second degauss cycle is needed, allow a minimum interval of 20 minutes for the best result. A humming noise may be heard, but this is not a malfunction.

On-screen messages

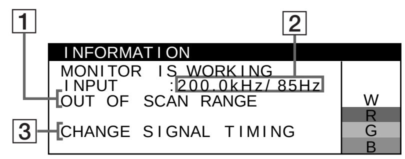


1 If “NO SIGNAL” appears:

This indicates that no signal is input from the connector.

2 Shows the remedies.

- If ACTIVATE BY COMPUTER appears on the screen, try pressing any key on the computer or moving the mouse, and confirm that your computer’s graphic board is completely seated in the correct bus slot.
- If CHECK SIGNAL CABLE appears on the screen, check that the monitor is correctly connected to the computer.



1 If “OUT OF SCAN RANGE” appears:

This indicates that the input signal is not supported by the monitor’s specifications.

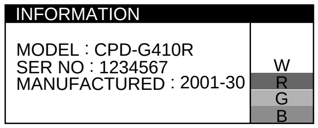
2 Shows the input signal frequency.

3 Shows the remedy.

CHANGE SIGNAL TIMING appears on the screen. If you are replacing an old monitor with this monitor, reconnect the old monitor. Then adjust the computer’s graphic board so that the horizontal frequency is between 30 – 110 kHz, and the vertical frequency is between 48 – 170 Hz.

To display this monitor's name, serial number, and date of manufacture.

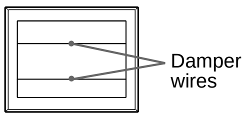
While the monitor is receiving a video signal, press and hold the MENU button for more than 5 seconds to display this monitor's information box.



If thin lines appear on the screen

(damper wires)

These lines do not indicate a malfunction; they are a normal effect of the Trinitron picture tube with this monitor. These are shadows from the damper wires used to stabilize the aperture grille. The aperture grille is the essential element that makes a Trinitron picture tube unique by allowing more light to reach the screen, resulting in a brighter, more detailed picture.



Self-diagnosis function

This monitor is equipped with a self-diagnosis function. If there is a problem with your monitor or computer, the screen will go blank and the ⏻ (power) indicator will either light up green or flash orange. If the ⏻ (power) indicator is lit in orange, the computer is in power saving mode. Try pressing any key on the keyboard or moving the mouse.

■ If the ⏻ (power) indicator is green

1 Disconnect the video signal cable, or turn off the connected computer.

2 Turn the monitor OFF and then ON.

3 Hold the control button upward for a few seconds before the monitor enters power saving mode.

If all 4 color bars appear (white, red, green, blue), the monitor is working properly. Reconnect the video input cables and check the condition of your computer.
If the color bars do not appear, there is a potential monitor failure. Inform your authorized Sony dealer of the monitor's condition.

■ If the ⏻ (power) indicator is flashing orange

Turn the monitor OFF and then ON.

If the ⏻ (power) indicator lights up green, the monitor is working properly.
If the ⏻ (power) indicator is still flashing, there is a potential monitor failure. Count the number of seconds between orange flashes of the ⏻ (power) indicator and inform your authorized Sony dealer of the monitor's condition. Be sure to note the model name and serial number of your monitor. Also note the make and model of your computer and graphics board.

Specifications

CRT
0.24 mm aperture grille pitch, 90-degree deflection, FD Trinitron
19 inches measured diagonally

Viewable image size
Approx. 365 × 274 mm (w/h) (14 3/8 × 10 7/8 inches)
18.0" viewing image

Resolution (H:Horizontal, V:Vertical)
Maximum: H: 1920 dots, V: 1440 lines
Recommended: H: 1280 dots, V: 1024 lines

Input signal levels
Video signal: Analog RGB: 0.700 Vp-p (positive), 75 Ω
SYNC signal: H/V separate or composite sync:
TTL 2 kΩ, Polarity free
Sync on Green: 0.3 Vp-p (negative)

Standard image area
Approx. 352 × 264 mm
(13 7/8 × 10 1/2 inches)

Deflection frequency (H:Horizontal, V:Vertical)
H: 30 to 110 kHz, V: 48 to 170 Hz

AC input voltage/current
100 to 240 V, 50 – 60 Hz, 2.0 – 1.0 A

Power Consumption
Approx. 135 W

Operating temperature
10 ºC to 40 ºC

Dimensions: Approx. 451 × 471 × 461 mm (w/h/d)
(17 7/8 × 18 5/8 × 18 1/4 inches)

Mass: Approx. 25.5 kg (56 lb 3 oz)

Plug and Play: DDC2B/DDC2Bi
GTF

Supplied accessories
Power cord
This instruction manual

US

(continued)

Preset and user modes

When the monitor receives an input signal, it automatically matches the signal to one of the factory preset modes stored in the monitor's memory to provide a high quality picture (see "Preset mode timing table" on page i). If the input signals does not match one of the factory preset modes, the monitor automatically provides the most appropriate picture for the input signal that is within the range of the vertical or horizontal frequencies (page 7) corresponding to the Generalized Timing Formula. When the picture is adjusted, the adjustment data is stored as a user mode and automatically recalled whenever the same input signal is received.

Power saving function

This monitor meets the power-saving guidelines set by VESA, TCO'99, and ENERGY STAR. If no signal is input to the monitor from your computer, the monitor will automatically reduce power consumption as shown below.

Power mode	Power consumption	⏻ (power) indicator
normal operation	≤ 135 W	green
active off*[1] (deep sleep)*[2]	≤ 3 W	orange

*[1] When your computer enters power saving mode, NO SIGNAL appears on the screen. After a few seconds, the monitor enters power saving mode.

*[2] "Deep sleep" is power saving mode defined by the Environmental Protection Agency.

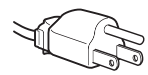
Design and specifications are subject to change without notice.

Precautions

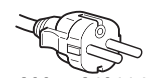
Warning on power connections

- Use the supplied power cord. If you use a different power cord, be sure that it is compatible with your local power supply.
  For the customers in the U.S.A.
  If you do not use the appropriate cord, this monitor will not conform to mandatory FCC standards.

Example of plug types



for 100 to 120 V AC



for 200 to 240 V AC

- Before disconnecting the power cord, wait at least 30 seconds after turning off the power to allow the static electricity on the screen's surface to discharge.
- After the power is turned on, the screen is demagnetized (degaussed) for about a few seconds. This generates a strong magnetic field around the screen which may affect data stored on magnetic tapes and disks placed near the monitor. Be sure to keep magnetic recording equipment, tapes, and disks away from the monitor.

The equipment should be installed near an easily accessible outlet.

Installation

Do not install the monitor in the following places:

- on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes
- near heat sources such as radiators or air ducts, or in a place subject to direct sunlight
- in a place subject to severe temperature changes
- in a place subject to mechanical vibration or shock
- on an unstable surface
- near equipment which generates magnetism, such as a transformer or high voltage power lines
- near or on an electrically charged metal surface
- inside an enclosed rack

Maintenance

- Clean the screen with a soft cloth. If you use a glass cleaning liquid, do not use any type of cleaner containing an anti-static solution or similar additive as this may scratch the screen's coating.
- Do not rub, touch, or tap the surface of the screen with sharp or abrasive items such as a ballpoint pen or screwdriver. This type of contact may result in a scratched picture tube.
- Clean the cabinet, panel and controls with a soft cloth lightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent, such as alcohol or benzine.

Transportation

When you transport this monitor for repair or shipment, use the original carton and packing materials.

Use of the tilt-swivel

This monitor can be adjusted within the angles shown right. To turn the monitor vertically or horizontally, hold it at the bottom with both hands. Be careful not to pinch your fingers at the back of the monitor when you tilt the monitor up vertically.

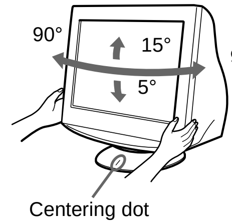
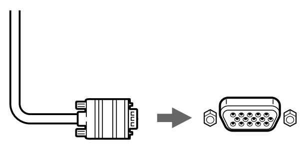


Table des Matières

Configuration

1 Raccordez votre moniteur à votre ordinateur

■ Raccordement au connecteur d'entrée HD15



Câble de signal vidéo du moniteur

vers le HD15 de l'ordinateur raccordé

Raccordement à un Macintosh ou un ordinateur compatible

Lorsque vous raccordez ce moniteur à un ordinateur Power Mac G3/G4, utilisez l'adaptateur Macintosh (non fourni), le cas échéant.

2 Mettez le moniteur et l'ordinateur sous tension

1 Raccordez le cordon d'alimentation au moniteur puis appuyez sur l'interrupteur ⏻ (alimentation) afin de mettre le moniteur sous tension.

2 Mettez l'ordinateur sous tension.

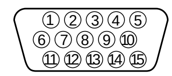
Vous n'avez pas besoin de pilotes spécifiques

Ce moniteur est conforme à la norme Plug & Play "DDC" et détecte automatiquement l'ensemble des informations relatives au moniteur. Il n'est pas nécessaire d'installer un pilote spécifique sur l'ordinateur.
Lorsque vous mettez votre ordinateur sous tension pour la première fois, après l'avoir raccordé au moniteur, il est possible que l'Assistant d'ajout de nouveau matériel apparaisse à l'écran. Dans ce cas, suivez les instructions affichées. Le moniteur Plug & Play approprié est sélectionné automatiquement, vous permettant ainsi de l'utiliser.

Remarques

- Ne touchez pas les broches du connecteur du câble de signal vidéo.
- Vérifiez l'alignement du connecteur HD15 pour ne pas tordre les broches du connecteur du câble de signal vidéo.

Connecteurs d'entrée HD15



N° de broche	Signal
1	Rouge
2	Vert (Sync sur Vert)
3	Bleu
4	ID (Masse)
5	Détection de l'unité centrale
6	Masse Rouge
7	Masse Vert
8	Masse Bleu

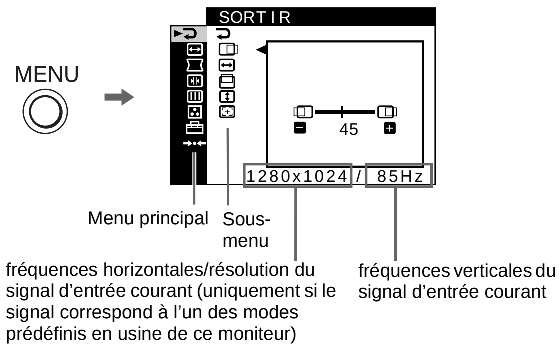
N° de broche	Signal
9	DDC + 5V*
10	Masse
11	ID (Masse)
12	Données bi-directionnelles (SDA)*
13	Sync H
14	Sync V
15	Horloge de données (SCL)*

* DDC (Display Data Channel) est une norme de VESA.

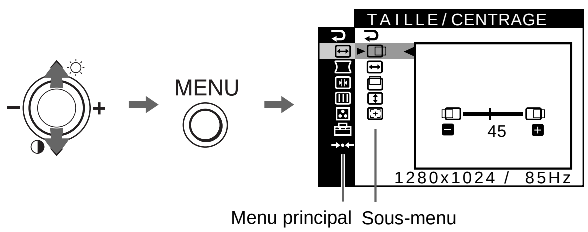
Réglages

Navigation dans le menu

1 Appuyez sur la touche MENU pour afficher le menu principal.



2 Déplacez la touche de commande ↓/↑ pour mettre en surbrillance le menu principal que vous souhaitez régler et appuyez sur la touche de commande.



3 Déplacez la touche de commande ↓/↑ pour mettre le sous-menu que vous souhaitez régler en surbrillance. Déplacez ensuite la touche de commande –/+ pour effectuer les réglages.

Pour fermer le menu

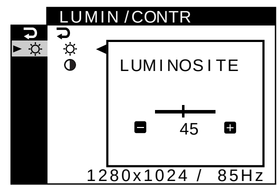
Appuyez deux fois sur la touche MENU pour revenir au menu principal. L'option sélectionnée par défaut est ↩. Le menu est fermé chaque fois que vous sélectionnez ↩ et que vous appuyez sur la touche MENU. Si aucune touche n'est activée, le menu se ferme automatiquement dans un délai d'environ 30 secondes.

Réglage de la luminosité et du contraste

Vous pouvez modifier la luminosité et le contraste à l'aide du menu LUMIN/CONTR. Ces réglages s'appliquent à tous les signaux d'entrée.

1 Déplacez la touche de commande ↑ (☼)/↓ (◑) pour afficher le menu LUMIN/CONTR.

2 Déplacez la touche de commande ↓/↑ pour sélectionner la luminosité (☼) ou le contraste (◑). Déplacez ensuite la touche de commande –/+ pour effectuer les réglages.



Remarque

Si vous avez sélectionné le mode sRGB dans (MODE COULEUR) dans le menu (COULEUR), le menu ☼/◑ (LUMIN/CONTR) du mode sRGB apparaît et il vous est impossible de régler la luminosité ou le contraste à l'écran. Pour obtenir davantage d'informations, reportez-vous au mode sRGB du menu (COULEUR).

Réglages du menu d'écran

Icônes du menu principal et éléments de réglage		Icônes du sous-menu et éléments de réglage	
	Réglage de la taille ou du centrage de l'image*[1]		Position horizontale
			Taille horizontale
			Position verticale
			Taille verticale
			Centrage de taille automatique
	Réglage de la forme de l'image		Rotation de l'image
			Étirement ou contraction des côtés de l'image*[1]
			Déplacement des bords de l'image vers la droite ou la gauche*[1]
			Réglage de la largeur de l'image en haut de l'écran*[1]
			Déplacement de l'image vers la droite ou la gauche en haut de l'écran*[1]
			REINITIALISATION : Les réglages sont tous réinitialisés sur les valeurs par défaut.
	Réglage de la convergence*[2]		Décalage horizontal des ombres rouges ou bleues
			Décalage vertical des ombres rouges ou bleues
		T	Décalage vertical des ombres rouges ou bleues en haut de l'écran
		B	Décalage horizontal des ombres rouges ou bleues en bas de l'écran
			REINITIALISATION : Les réglages sont tous réinitialisés sur les valeurs par défaut.
	Réglage de la qualité de l'image		DEMAGNET : démagnétise le moniteur.
			SUPPRESSION MOIRAGE*[4] : règle le degré de suppression du moiré afin de réduire le moiré au minimum.*[1]
	Réglage de la couleur de l'image	Voir " : pour régler la couleur de l'image".	
	Réglages supplémentaires		Protection des données de réglage (VERROU MENU)*[5]
			Sélection de la langue d'affichage à l'écran/Confirmation des informations relatives au moniteur LANGUAGE/INFORMATIONS*[3]
			Modification de la position du menu pour le réglage horizontal
			Modification de la position du menu pour le réglage vertical
	Réinitialisation des réglages	1*[1]	Réinitialisation de l'ensemble des données de réglage pour le signal d'entrée actuel.*[6] Appuyez sur "OK".
		2*[2]	Réinitialisation de l'ensemble des données de réglage pour tous les signaux d'entrée. Appuyez sur "OK".

*[1] Ce réglage est effectif pour le signal d'entrée courant.
*[2] Ce réglage est effectif pour tous les autres signaux d'entrée.
*[3] Menu de langues

- **ENGLISH : Anglais**
- **FRANÇAIS**
- **DEUTSCH : Allemand**
- **ESPAÑOL : Espagnol**
- **ITALIANO : Italien**
- **NEDERLANDS : Néerlandais**
- **SVENSKA : Suédois**
- РУССКИЙ**: Russe**
- 日本語**: Japonais**

*[4] Exemple de moiré



*[5] Seul le commutateur (d'alimentation), et (VERROU MENU) fonctionnent.

*[6] Les options de menu , , et ne sont pas réinitialisées par cette méthode.

: pour régler la couleur de l'image

Les paramètres COULEUR permettent de régler la température des couleurs de l'image en changeant le niveau de couleur des champs de couleur blanche. Les couleurs apparaissent rougeâtres lorsque la température est basse et bleuâtres lorsqu'elle est élevée. Ce réglage s'avère pratique pour faire correspondre les couleurs du moniteur avec les couleurs d'une image imprimée.
Sélectionnez l'un des quatre modes de réglage de la température des couleurs (PRESELECT, VARIABLE, EXPERT et sRGB) dans le menu (MODE COULEUR) et le menu (COULEUR).

■ PRESELECT (Réglage par défaut)

Vous pouvez sélectionner une température des couleurs prédéfinie, à savoir 5000K, 6500K ou 9300K. Le réglage par défaut est 9300K.

■ VARIABLE

Vous pouvez régler la température des couleurs dans une plage comprise entre 5000K et 11000K.

■ EXPERT

Vous pouvez effectuer des réglages affinés supplémentaires des couleurs en sélectionnant ce mode. GAIN ( ) règle les zones lumineuses de l'écran, alors que BIAS ( ) règle les zones sombres.

Sélectionnez	pour
R BIAS	R (Rouge) BIAS
G BIAS	G (Vert) BIAS
B BIAS	B (Bleu) BIAS
	REINITIALISATION*

Sélectionnez	pour
R GAIN	R (Rouge) GAIN
G GAIN	G (Vert) GAIN
B GAIN	B (Bleu) GAIN

* Restaure tous les réglages du mode Expert à leurs valeurs par défaut.

■ sRGB

Le réglage de couleur sRGB est un protocole industriel standard pour les espaces colorimétriques. Il est conçu pour harmoniser les couleurs affichées sur le moniteur et les couleurs imprimées. Pour afficher les couleurs sRGB correctement (γ = 2,2, 6500K), sélectionnez le mode sRGB et réglez l'ordinateur raccordé sur les profils sRGB. Il est impossible d'utiliser les réglages du menu LUMIN/CONTR. lorsque vous sélectionnez le mode sRGB.

Remarque

Confirmez que les valeurs de luminosité ( ) et de contraste ( ) correspondent à celles du mode sRGB dans le menu LUMIN/CONTR. Sinon, sélectionnez 1 dans le menu (REINITIALISATION).

FR

Dépannage

■ Aucune image

Si l'indicateur ⏻ (alimentation) est éteint

- Assurez-vous que le cordon d'alimentation est raccordé correctement.
- Vérifiez que l'interrupteur ⏻ (alimentation) est en position activée (on).

L'indicateur ⏻ (alimentation) est allumé en orange

- Vérifiez que le câble de signal vidéo est correctement raccordé et que toutes les prises sont complètement enfichées.
- Vérifiez que les broches du connecteur d'entrée vidéo HD15 ne sont pas pliées ni enfoncées.
- Assurez-vous que l'ordinateur est sous tension.
- L'ordinateur est en mode d'économie d'énergie. Essayez d'appuyer sur une touche ou de déplacer la souris.
- Vérifiez que la carte graphique est bien insérée dans le connecteur de bus approprié.

Si l'indicateur ⏻ (alimentation) est vert ou orange clignotant

- Utilisez la fonction d'auto-diagnostic.

■ L'image scintille, sautille, oscille ou est brouillée

- Isolez et supprimez les sources potentielles de champs électriques ou magnétiques tels que d'autres moniteurs, des imprimantes laser, des éclairages fluorescents ou des téléviseurs.
- Éloignez le moniteur des lignes à haute tension ou placez un blindage magnétique à proximité du moniteur.
- Banchez le moniteur sur une autre prise secteur, de préférence raccordée à un autre circuit.
- Faites pivoter le moniteur de 90° vers la gauche ou la droite.
- Vérifiez le réglage adéquat pour le moniteur dans le mode d'emploi de votre carte graphique.
- Assurez-vous que le mode graphique et la fréquence du signal d'entrée sont pris en charge par ce moniteur (voir le tableau de modes prédéfinis (Preset mode timing table) page i). Même si la fréquence est comprise dans la plage appropriée, il est possible que certaines cartes graphiques aient une impulsion de synchronisation trop étroite pour que le moniteur puisse se synchroniser correctement.
- Ajustez le taux de régénération de l'ordinateur (fréquence verticale) de façon à obtenir la meilleure image possible.

■ L'image est floue

- Réglez la luminosité, le contraste.
- Démagnétisez le moniteur.*
- Réglez le degré de suppression du moiré afin de réduire le moiré au minimum ou réglez SUPPRESSION MOIRAGE sur INACTIF.

■ Des images fantômes apparaissent

- N'utilisez pas de prolongateurs de câble vidéo et/ou de boîtiers de commutation vidéo.
- Vérifiez que toutes les fiches sont bien connectées dans leurs prises respectives.

■ L'image n'est pas centrée ou est de taille incorrecte

- Exécutez le Centrage de taille automatique.
- Ajustez la taille ou le centrage. Veuillez noter que pour certains signaux d'entrée et/ou cartes graphiques, il est possible que l'image ne remplisse pas totalement la surface de l'écran.
- Juste après la commutation de l'interrupteur d'alimentation, le réglage correct de la taille et du centrage peut prendre un certain temps.

■ Les bords de l'image sont incurvés

- Réglez la géométrie.

■ Un motif ondulatoire ou elliptique (moiré) est visible

- Réglez le degré de suppression du moiré afin de réduire le moiré au minimum.
- Changez le motif de votre bureau.

■ Les couleurs ne sont pas uniformes

- Démagnétisez le moniteur.* Si vous placez à côté du moniteur un appareil qui génère un champ magnétique, comme un haut-parleur, ou si vous changez l'orientation du moniteur, il est possible que les couleurs perdent leur uniformité.

■ Le blanc n'est pas blanc

- Réglez la température des couleurs.

■ Les touches du moniteur ne fonctionnent pas (🔑 apparaît à l'écran)

- Si la fonction de verrouillage des commandes est réglée sur ACTIF, réglez-la sur INACTIF.

■ Les bords des lettres et des lignes sont soulignés d'une ombre rouge ou bleue

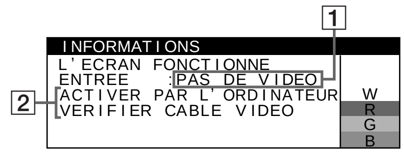
- Réglez la convergence.

■ Un bourdonnement est audible juste après la mise sous tension

- Il s'agit du son provoqué par le cycle de démagnétisation automatique. Lorsque le moniteur est mis sous tension, il est automatiquement démagnétisé pendant quelques secondes.

* Si un deuxième cycle de démagnétisation est nécessaire, attendez au minimum 20 minutes pour un résultat optimal. Un bourdonnement peut être audible, ceci est normal.

Messages à l'écran

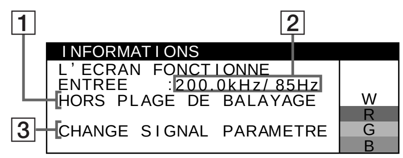


1 Si "PAS DE VIDEO" s'affiche :

Ceci indique qu'aucun signal ne provient du connecteur.

2 Indique les remèdes.

- Si le message ACTIVER PAR L'ORDINATEUR apparaît à l'écran, essayez d'appuyer sur une touche quelconque du clavier ou de déplacer la souris et assurez-vous que la carte graphique est correctement et totalement insérée dans le connecteur de bus adéquat.
- Si le message VERIFIER CABLE VIDEO apparaît à l'écran, vérifiez que le moniteur est connecté correctement à l'ordinateur.



1 Si "HORS PLAGE DE BALAYAGE" s'affiche :

Ceci indique que le signal d'entrée n'est pas pris en charge par les spécifications du moniteur.

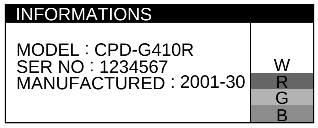
2 Affiche la fréquence du signal d'entrée.

3 Indique le remède.

Le message CHANGE SIGNAL PARAMETRE apparaît à l'écran. Si vous remplacez votre ancien moniteur par ce moniteur, rebranchez l'ancien moniteur. Ajustez ensuite la carte graphique de l'ordinateur de sorte que la fréquence horizontale soit comprise entre 30 et 110 kHz, et que la fréquence verticale soit comprise entre 48 et 170 Hz.

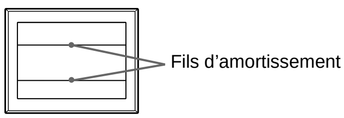
Affichage de l'identification du moniteur, du numéro de série et de la date de fabrication.

Alors que l'écran reçoit un signal vidéo, maintenez la touche MENU enfoncée pendant plus de 5 secondes pour afficher les informations relatives à ce moniteur.



Si des lignes fines apparaissent à l'écran (fils d'amortissement)

Ces lignes ne constituent aucunement un dysfonctionnement ; elles résultent de l'utilisation du tube image Trinitron sur ce moniteur. Ces lignes sont en fait l'ombre des fils d'amortissement employés pour stabiliser la grille d'ouverture. Cette grille est un composant essentiel qui rend le tube d'image Trinitron unique en laissant passer une plus grande quantité de lumière vers l'écran, permettant ainsi d'obtenir une image plus lumineuse et plus détaillée.



Fonction d'auto-diagnostic

Ce moniteur est équipé d'une fonction d'auto-diagnostic. En cas de problème avec votre moniteur ou votre ordinateur, rien n'est affiché à l'écran et le témoin ⏻ (alimentation) s'allume en vert ou clignote en orange. Si l'indicateur ⏻ (alimentation) est allumé en orange, l'ordinateur est en mode d'économie d'énergie. Essayez d'appuyer sur une touche ou de déplacer la souris.

■ Si l'indicateur ⏻ (alimentation) s'allume en vert

1 Débranchez le câble de signal vidéo ou mettez l'ordinateur raccordé hors tension.

2 Eteignez, puis rallumez le moniteur.

3 Maintenez le bouton de commande vers le haut pendant quelques secondes avant que le moniteur n'entre en mode d'économie d'énergie.

Si les quatre barres de couleurs apparaissent (blanc, rouge, vert et bleu), le moniteur fonctionne correctement. Rebranchez les câbles d'entrée vidéo et vérifiez l'état de votre ordinateur.
Si les barres de couleur n'apparaissent pas, il est possible que le moniteur ne fonctionne pas normalement. Informez votre revendeur Sony agréé de l'état du moniteur.

■ Si l'indicateur ⏻ (alimentation) clignote en orange

Eteignez, puis rallumez le moniteur.

Si l'indicateur ⏻ (alimentation) est allumé en vert, le moniteur fonctionne correctement.
Si l'indicateur ⏻ (alimentation) clignote toujours, il est possible que le moniteur ne fonctionne pas normalement. Comptez le nombre de secondes entre les clignotements oranges de l'indicateur ⏻ (alimentation) et informez votre revendeur Sony agréé de l'état du moniteur. Notez soigneusement le modèle et le numéro de série du moniteur. Notez également la marque et le modèle de l'ordinateur et de la carte graphique.

Spécifications

CRT
Pas d'ouverture de grille de 0,24 mm, déflexion de 90 degrés
FD Trinitron, 19 pouces en diagonale

Taille de l'image affichée
Environ 365 × 274 mm (l/h) (14 3/8 × 10 7/8 pouces)
Zone de visualisation de 18,0"

Résolution (H : Horizontal, V : Vertical)
Maximum H : 1920 points, V : 1440 lignes
Recommandé H : 1280 points, V : 1024 lignes

Niveaux des signaux d'entrée
Signal vidéo : RVB analogique : 0,700 Vcc (positif), 75 Ω
Signal SYNC : H/V séparé ou sync composite :
TTL 2 kΩ, sans polarité
Sync sur Vert : 0,3 Vcc (négatif)

Zone d'image standard
Environ 352 × 264 mm
(13 7/8 × 10 1/2 pouces)

Fréquence de déflexion (H : Horizontal, V : Vertical)
H : 30 à 110 kHz, V : 48 à 170 Hz

Voltage d'entrée secteur
100 à 240 V, 50 – 60 Hz, 2,0 – 1,0 A

Consommation électrique
Environ 135 W

Température d'utilisation
10°C à 40°C

Dimensions Environ 451 × 471 × 461 mm (l/h/p)
(17 7/8 × 18 5/8 × 18 1/4 pouces)

Poids Environ 25,5 kg (56 lb 3 oz)

Plug and Play DDC2B/DDC2Bi
GTF

Accessoires fournis Cordon d'alimentation
Le présent mode d'emploi

FR

(suite page suivante)

Modes préréglés et personnalisés

Lorque le moniteur reçoit un signal d'entrée, il compare automatiquement le signal à l'un des modes prédéfinis en usine mémorisés afin de fournir une image de haute qualité (voir le tableau de modes prédéfinis (Preset mode timing table) page i). Si le signal d'entrée ne correspond à aucun des modes prédéfinis en usine, le moniteur fournit automatiquement l'image la plus appropriée à ce signal d'entrée, dans la plage de fréquences verticales ou horizontales (page 7), selon la formule de minutage généralisée. Lorsque l'image est réglée, les données de réglage sont mémorisées comme un mode utilisateur et sont automatiquement utilisées dès qu'un signal d'entrée identique est reçu.

Fonction d'économie d'énergie

Ce moniteur satisfait aux critères d'économie d'énergie VESA, TCO'99 et ENERGY STAR. Lorsqu'aucun signal n'est envoyé au moniteur par l'ordinateur, le moniteur réduit automatiquement la consommation d'énergie comme indiqué ci-dessous.

Mode d'alimentation	Consommation électrique	indicateur ⏻ (alimentation)
fonctionnement normal	≤ 135 W	vert
inactif*[1] (sommeil profond)*[2]	≤ 3 W	orange

*[1] PAS DE VIDEO s'affiche à l'écran lorsque votre ordinateur passe en mode d'économie d'énergie. Le moniteur passe en mode d'économie d'énergie quelques secondes plus tard.

*[2] "Sommeil profond" est le mode d'économie d'énergie défini par l'agence de protection de l'environnement.

La conception et les spécifications sont sujettes à modifications sans préavis.

Précautions

Avertissement relatif au raccordement secteur

- Utilisez le cordon d'alimentation fourni. Si vous utilisez un cordon d'alimentation différent, assurez-vous que ce dernier est compatible avec votre réseau d'alimentation électrique.
  Pour les clients aux Etats-Unis
  Si vous n'utilisez pas le cordon d'alimentation approprié, ce moniteur ne sera pas conforme aux normes FCC en vigueur.

Exemple de types de prises



pour 100 à 120 V CA pour 200 à 240 V CA

- Avant de débrancher le cordon d'alimentation, attendez au moins 30 secondes avant de couper l'alimentation afin de permettre le déchargement de l'électricité statique de la surface de l'écran.
- Après la mise sous tension, l'écran est démagnétisé pendant quelques secondes. Ceci génère un champ magnétique puissant autour de l'écran, susceptible d'altérer les données stockées sur les cassettes ou bandes placées à proximité du moniteur. Assurez-vous de ne pas placer d'équipement d'enregistrement magnétique, de bandes ou de disquettes à proximité du moniteur.

> La prise électrique doit être installée à proximité de l'appareil et facile d'accès.

Installation

N'installez pas le moniteur dans les endroits suivantes :

- sur des surfaces textiles (tapis, couvertures, etc.) ni à proximité de tissus (rideaux, draperies, etc.) qui risquent d'obstruer les orifices de ventilation
- près de sources de chaleur telles que des radiateurs ou des conduits d'air chaud ou à un emplacement exposé aux rayons directs du soleil
- dans un endroit sujet à de fortes variations de température
- dans un endroit sujet à des vibrations mécaniques ou à des chocs
- sur une surface instable
- près d'un équipement générant un champ magnétique, tel qu'un transformateur ou des lignes à haute tension
- près ou sur une surface métallique chargée d'électricité
- dans un rack fermé

Entretien

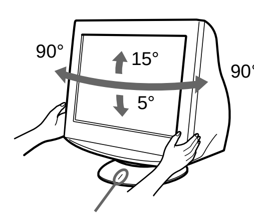
- Nettoyez l'écran en utilisant un chiffon doux et sec. Si vous utilisez un nettoyant pour vitres, n'utilisez pas de produits contenant une solution antistatique ou une solution similaire qui risque d'abîmer le revêtement de l'écran.
- Ne frottez pas, ne touchez pas et ne tapotez pas la surface de l'écran avec des objets pointus ou abrasifs, tels que la pointe d'un stylo ou un tournevis. Dans le cas contraire, vous pourriez rayer le tube de l'écran.
- Nettoyez le châssis, l'écran et les commandes à l'aide d'un chiffon doux légèrement imbibé d'une solution détergente non agressive. N'utilisez pas d'éponge abrasive, de poudre à récurer ou de solvant, tel que de l'alcool ou de la benzine.

Transport

Lorsque vous transportez ce moniteur, utilisez le carton et les matériaux d'emballage d'origine.

Utilisation du pied pivotant

Ce moniteur peut être ajusté selon les angles illustrés ci-contre. Pour tourner le moniteur verticalement ou horizontalement, tenez sa base avec les deux mains. Prenez garde de ne pas vous coincer les doigts derrière le moniteur lorsque vous l'inclinez à la verticale.



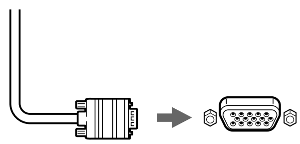
Point de centrage

Índice

Configuración

1 Conexión del monitor al ordenador

■ Para conectarlo al conector de entrada HD15



Conexión de un ordenador Macintosh o compatible

Cuando conecte este monitor a un ordenador Power Mac G3/G4, utilice el adaptador Macintosh (no suministrado) en caso de ser necesario.

2 Encendido del monitor y el ordenador

1 Conecte el cable de alimentación al monitor y pulse el interruptor ⏻ (alimentación) para encender dicho monitor.

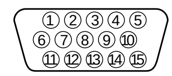
2 Encienda el ordenador.

Innecesario para controladores específicos

Este monitor cumple con el estándar Plug & Play "DDC" y detecta automáticamente toda la información de dicho monitor. No es preciso instalar ningún controlador específico en el ordenador.
La primera vez que encienda el PC después de conectar el monitor, es posible que aparezca el asistente de instalación en pantalla. En este caso, siga las instrucciones en pantalla. Se selecciona automáticamente el monitor Plug & Play para que pueda utilizar este monitor.

Notas
- No toque los terminales del conector del cable de señal de vídeo.
- Compruebe la alineación del conector HD15 para evitar que se doblen los terminales del conector del cable de señal de vídeo.

Conectores de entrada HD15



Terminal nº	Señal
1	Rojo
2	Verde (Sincronización en verde)
3	Azul
4	Identificación (Masa)
5	Detección de CPU
6	Masa roja
7	Masa verde
8	Masa azul

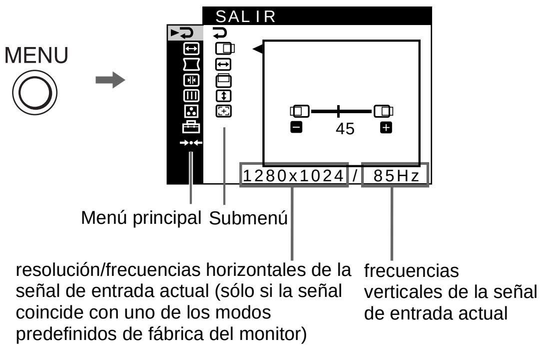
Terminal nº	Señal
9	DDC + 5V*
10	Masa
11	Identificación (Masa)
12	Datos bidireccionales (SDA)*
13	Sincronización H.
14	Sincronización V.
15	Reloj de datos (SCL)*

* DDC (Canal de datos de visualización) es un estándar de VESA.

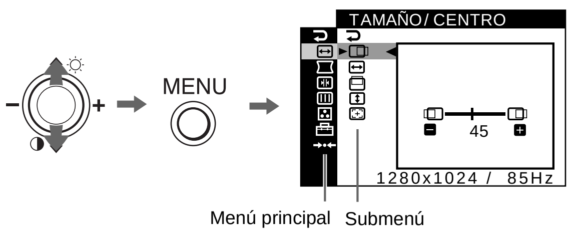
Ajustes

Navegación por el menú

1 Pulse el botón MENU para visualizar el menú principal.



2 Desplace el botón de control ↓/↑ para resaltar el menú principal que desee ajustar y pulse el botón de control.



3 Mueva el botón de control ↓/↑ para destacar el submenú que desee ajustar. A continuación, mueva el botón de control –/+ para hacer los ajustes.

Para cerrar el menú

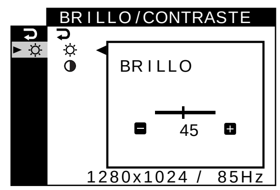
Pulse el botón MENU dos veces para volver al menú principal. El elemento seleccionado de forma predeterminada es ⮌. Cada vez que seleccione ⮌ y pulse el botón MENU, saldrá del menú. Si no se pulsa ningún botón, el menú se cierra automáticamente al cabo de aproximadamente 30 segundos.

Ajuste del brillo y el contraste

El ajuste del brillo y el contraste se efectúa mediante un menú BRILLO/CONTRASTE separado. Estos ajustes son adecuados para todo tipo de señales de entrada.

1 Mueva el botón de control ↑ (☼)/↓ (◑) para visualizar el menú BRILLO/CONTRASTE.

2 Mueva el botón de control ↓ /↑ para seleccionar el brillo (☼) o el contraste (◑). A continuación, mueva el botón de control –/+ para hacer los ajustes.



Nota

Si selecciona el modo sRGB en el elemento (MODO DE COLOR) del menú (COLOR), aparecerá el menú ☼/◑ (BRILLO/CONTRASTE) para dicho modo y no podrá ajustar el brillo ni el contraste en esa pantalla. Para obtener más información sobre el uso del modo sRGB, consulte Modo sRGB en el menú (COLOR).

Ajustes de menús en pantalla

Iconos del menú principal y elementos de ajuste		Iconos del submenú y elementos de ajuste	
	Ajuste del tamaño o centrado de la imagen*1		Posición horizontal
			Tamaño horizontal
			Posición vertical
			Tamaño vertical
			Centrado de tamaño automático
	Ajuste de la forma de la imagen		Giro de la imagen
			Expansión o contracción de los lados de la imagen*1
			Desplazamiento de los lados de la imagen a la izquierda o la derecha*1
			Ajuste de la anchura de la imagen en la parte superior de la pantalla*1
			Desplazamiento de la imagen a la izquierda o la derecha en la parte superior de la pantalla*1
		→•←	RESTAURAR: recupera todos los ajustes de fábrica.
	Ajuste de la convergencia*2		Desplazamiento de las sombras rojas o azules en sentido horizontal
			Desplazamiento de las sombras rojas o azules en sentido vertical
		T	Desplazamiento de las sombras rojas o azules en sentido vertical en la parte superior de la pantalla
		B	Desplazamiento de las sombras rojas o azules en sentido vertical en la parte inferior de la pantalla
		→•←	RESTAURAR: recupera todos los ajustes de fábrica.
	Ajuste de la calidad de imagen		DESMAGNET: desmagnetiza el monitor.
			ELIMINAR MOIRE*4: ajusta el grado de cancelación de muaré hasta que éste sea mínimo.*1
	Ajuste del color de la imagen	Consulte “: Para ajustar el color de la imagen”.	
	Ajustes adicionales		Protección de los datos de ajuste (BLOQUEO DE AJUSTES)*5
			Selección del idioma de los menús en pantalla/Comprobación de la información del monitor LANGUAGE/INFORMACION*3
			Cambio de la posición de los menús para el ajuste horizontal
			Cambio de la posición de los menús para el ajuste vertical
→•←	Restauración de los ajustes	→•←1*1	Restauración de todos los datos de ajuste para la señal de entrada actual.*6 Seleccione “ACEPTAR”.
		→•←2*2	Restauración de todos los datos de ajuste para todas las señales de entrada. Seleccione “ACEPTAR”.

ES

*1 Este ajuste es efectivo para la señal de entrada actual.
*2 Este ajuste es efectivo para todas las señales de entrada.
*3 Menú de idiomas

- **ENGLISH: Inglés**
- **FRANÇAIS: Francés**
- **DEUTSCH: Alemán**
- **ESPAÑOL**
- **ITALIANO: Italiano**
- **NEDERLANDS: Holandés**
- **SVENSKA: Sueco**
- **РУССКИЙ: Ruso**
- **日本語: Japonés**

*4 Ejemplo de muaré



*5 Sólo funcionará el interruptor (⏻) alimentación, y el menú (BLOQUEO DE AJUSTES).
*6 Los elementos de menú , , y no se restauran mediante este método.

: Para ajustar el color de la imagen

Los ajustes de COLOR permiten definir la temperatura del color de la imagen cambiando el nivel de color del campo de color blanco. Los colores aparecerán con un tono rojizo si la temperatura es baja, y con un tono azulado si es alta. Este ajuste es útil para hacer coincidir el color del monitor con los colores de imágenes impresas.
Seleccione uno de los modos de configuración de la temperatura de colores de entre los 4 modos existentes; PREDEFIN, VARIABLE, EXPERTO y sRGB en (MODO DE COLOR) del menú (COLOR).

■ PREDEFIN (Ajuste de fábrica)

Puede seleccionar la temperatura del color predefinida entre 5000K, 6500K o 9300K. El ajuste de fábrica es 9300K.

■ VARIABLE

Puede ajustar la temperatura del color entre 5000K y 11000K.

■ EXPERTO

Puede realizar ajustes adicionales con precisión en el color mediante la selección de este modo. GAIN (◑) ajusta las partes luminosas de la pantalla, mientras que BIAS (☼) ajusta las partes oscuras.

Seleccione	para
R ☼	R (Rojo) BIAS
G ☼	G (Verde) BIAS
B ☼	B (Azul) BIAS
→•←	RESTAURAR*

Seleccione	para
R ◑	R (Rojo) GAIN
G ◑	G (Verde) GAIN
B ◑	B (Azul) GAIN

* Devuelve a la configuración del modo Experto la configuración de fábrica.

■ sRGB

El ajuste de color sRGB es un protocolo estándar de espacio de color diseñado para establecer una equivalencia entre los colores mostrados en el monitor y los impresos. Para visualizar los colores de sRGB correctamente ($\gamma = 2{,}2$, 6500K), seleccione el modo sRGB y el ordenador conectado a los perfiles sRGB. Si selecciona sRGB, no podrá utilizar los ajustes del menú BRILLO/CONTRASTE.

Nota

Compruebe que los valores de brillo (☼) y contraste (◑) están ajustados respectivamente en los números que van a ajustarse en el modo sRGB mostrados en el menú BRILLO/CONTRASTE. Si no, seleccione →•←1 en el menú →•← (RESTAURAR).

Solución de problemas

■ No aparece la imagen

Si el indicador ⏻ (alimentación) no se ilumina

- Compruebe que el cable de alimentación está correctamente conectado.
- Compruebe que el interruptor ⏻ (alimentación) se encuentra en la posición de encendido.

El indicador ⏻ (alimentación) aparece en naranja

- Compruebe que el cable de señal de vídeo está correctamente conectado y que todos los enchufes están perfectamente insertados en sus clavijas.
- Compruebe que los terminales del conector de entrada de vídeo HD15 no están doblados ni aplastados.
- Compruebe que la alimentación del ordenador está activada.
- El ordenador está en el modo de ahorro de energía. Pulse cualquier tecla del teclado del ordenador o mueva el ratón.
- Compruebe que la tarjeta gráfica se encuentra completamente insertada en la ranura de bus adecuada.

Si el indicador ⏻ (alimentación) se ilumina en verde o parpadea en naranja

- Utilice la función de autodiagnóstico.

■ La imagen parpadea, se ondula, oscila o aparece codificada

- Aísle y elimine las fuentes potenciales de campos eléctricos o magnéticos, como otros monitores, impresoras láser, ventiladores eléctricos, luces fluorescentes o televisores.
- Aleje el monitor de líneas eléctricas o instale una protección magnética cerca del monitor.
- Enchufe el monitor en una toma de CA diferente, preferiblemente de un circuito diferente.
- Gire el monitor 90° a la izquierda o la derecha.
- Consulte el manual de la tarjeta gráfica para obtener información sobre el ajuste adecuado para el monitor.
- Compruebe que este monitor admite el modo gráfico y la frecuencia de la señal de entrada (consulte la “Tabla de temporización de modo predefinido (Preset mode timing table)” en la página i). Aunque la frecuencia se encuentre dentro del margen adecuado, algunas tarjetas gráficas pueden tener un impulso de sincronización demasiado estrecho para que el monitor se sincronice correctamente.
- Ajuste la frecuencia de barrido (frecuencia vertical) del ordenador para obtener la mejor imagen posible.

■ La imagen es borrosa

- Ajuste el brillo, el contraste.
- Desmagnetice el monitor.*
- Ajuste el grado de cancelación de muaré hasta que éste sea mínimo, o ajuste ELIMINAR MOIRE en NO.

■ Aparecen imágenes fantasma

- Deje de utilizar cables prolongadores de vídeo y/o dispositivos de conmutación de vídeo.
- Compruebe que todos los enchufes están firmemente insertados en sus receptáculos.

■ La imagen no está centrada o su tamaño no es correcto

- Realice la función de centrado y tamaño automáticos.
- Ajuste el tamaño o el centrado. Tenga en cuenta que con determinadas señales de entrada y/o tarjetas gráficas, la periferia de la pantalla no se utiliza por completo.
- Inmediatamente después de activar el interruptor de alimentación, el tamaño/centrado pueden tardar unos instantes en ajustarse adecuadamente.

■ Los bordes de la imagen aparecen curvos

- Ajuste la geometría.

■ Aparece un patrón ondulado o elíptico (muaré)

- Ajuste el grado de cancelación de muaré hasta que éste sea mínimo.
- Cambie el patrón de escritorio.

■ El color no es uniforme

- Desmagnetice el monitor.* Si coloca equipos que generen campos magnéticos, como altavoces, cerca del monitor, o si cambia la orientación de éste, el color puede perder uniformidad.

■ El blanco no parece blanco

- Ajuste la temperatura del color.

■ Los botones del monitor no funcionan (aparece en pantalla)

- Si el bloqueo de los controles está ajustado en SI, ajústelo en NO.

■ Las letras y líneas muestran sombras rojas o azules en los bordes

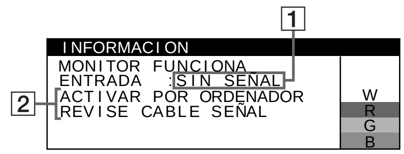
- Ajuste la convergencia.

■ Se oye un zumbido inmediatamente después de activar la alimentación

- Este es el sonido del ciclo de desmagnetización automática. Cuando se activa la alimentación, el monitor se desmagnetiza durante unos segundos.

* Si es necesario aplicar un segundo ciclo de desmagnetización, deje que transcurra un intervalo mínimo de 20 minutos para obtener resultados óptimos. Es posible que se oiga un zumbido, pero esto no es fallo de funcionamiento.

Mensajes en pantalla

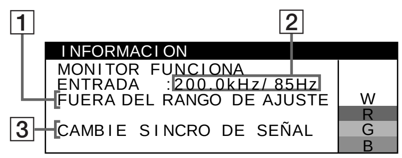


1 Si aparece “SIN SEÑAL”:

Esto indica que no existe ninguna señal de entrada del conector.

2 Muestra las soluciones.

- Si ACTIVAR POR ORDENADOR aparece en pantalla, pulse cualquier tecla del ordenador o mueva el ratón, y verifique que la tarjeta gráfica de dicho ordenador se encuentra completamente insertada en la ranura de bus correcta.
- Si REVISE CABLE SEÑAL aparece en pantalla, compruebe que el monitor está correctamente conectado al ordenador.



1 Si aparece “FUERA DEL RANGO DE AJUSTE”:

Esto indica que la señal de entrada no cumple las especificaciones del monitor.

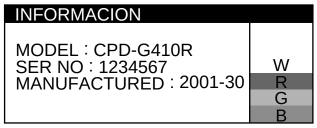
2 Muestra la frecuencia de la señal de entrada.

3 Muestra la solución.

CAMBIE SINCRO DE SEÑAL aparece en pantalla. Si sustituye un monitor antiguo por este monitor, vuelva a conectar el antiguo. A continuación, ajuste la tarjeta gráfica del ordenador de forma que la frecuencia horizontal se encuentre entre 30 – 110 kHz, y la vertical entre 48 – 170 Hz.

Para visualizar el nombre, número de serie y fecha de fabricación de este monitor.

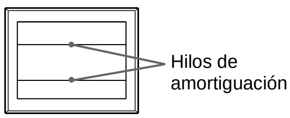
Mientras el monitor recibe una señal de vídeo, pulse y mantenga pulsado el botón MENU durante más de 5 segundos para visualizar el cuadro de información de este monitor.



Si aparecen líneas finas en pantalla

(hilos de amortiguación)

Estas líneas no indican fallo de funcionamiento; son un efecto normal del tubo de imagen Trinitron con este monitor. Se trata de sombras de los hilos de amortiguación utilizados para estabilizar la rejilla de apertura. La rejilla de apertura es el elemento esencial que hace que el tubo de imagen Trinitron sea único al permitir que llegue más luz a la pantalla, obteniéndose imágenes con mayor brillo y detalle.



Función de autodiagnóstico

Este monitor dispone de una función de autodiagnóstico. Si existe un problema con su monitor o con su ordenador, la pantalla se quedará sin imagen y el indicador ⏻ (alimentación) se iluminará en verde o parpadeará en naranja. Si el indicador ⏻ (alimentación) se ilumina en naranja, significa que el ordenador está en el modo de ahorro de energía. Pulse cualquier tecla del teclado o mueva el ratón.

■ Si el indicador ⏻ (alimentación) se ilumina en verde

1 Desconecte el cable de la señal de vídeo o apague el ordenador conectado.

2 Apague (OFF) el monitor y vuelva a encenderlo (ON).

3 Mantenga el botón de control desplazado hacia arriba durante unos segundos antes de que el monitor entre en el modo de ahorro de energía.

Si aparecen cuatro barras de color (blanco, rojo, verde, azul), significa que el monitor funciona correctamente. Vuelva a conectar los cables de entrada de vídeo y compruebe el estado de su ordenador.
Si las barras de color no aparecen, significa que existe un fallo potencial del monitor. Informe a un proveedor Sony autorizado sobre el estado del monitor.

■ Si el indicador ⏻ (alimentación) parpadea en naranja

Apague (OFF) el monitor y vuelva a encenderlo (ON).

Si el indicador ⏻ (alimentación) se ilumina en verde, significa que el monitor funciona correctamente.
Si el indicador ⏻ (alimentación) aún parpadea, significa que existe un fallo potencial del monitor. Cuente el número de segundos entre los parpadeos en naranja del indicador ⏻ (alimentación) e informe a un proveedor Sony autorizado sobre el estado del monitor. Asegúrese de anotar el nombre del modelo y el número de serie del monitor. Tome nota también del fabricante y modelo del ordenador y de la tarjeta gráfica.

Especificaciones

TRC
Paso de la rejilla de apertura de 0,24 mm, 90 grados de deflexión
FD Trinitron, 19 pulgadas, medido en diagonal

Tamaño de imagen visualizable
Aprox. 365 × 274 mm (an/al) (14 3/8 × 10 7/8 pulgadas)
Imagen de visualización de 18,0"

Resolución (H:Horizontal, V:Vertical)
Máxima: H: 1920 puntos, V: 1440 líneas
Recomendada: H: 1280 puntos, V: 1024 líneas

Niveles de señal de entrada
Señal de vídeo: RGB analógica: 0,700 Vp-p (positiva), 75 Ω
Señal SYNC: Sincronización H/V separada o compuesta:
TTL 2 kΩ, Sin polaridad
Sincronización en verde: 0,3 Vp-p (negativa)

Área de imagen estándar
Aprox. 352 × 264 mm
(13 7/8 × 10 1/2 pulgadas)

Frecuencia de deflexión (H:Horizontal, V:Vertical)
H: 30 a 110 kHz, V: 48 a 170 Hz

Corriente/tensión de entrada de CA
100 a 240 V, 50 – 60 Hz, 2,0 – 1,0 A

Consumo de energía
Aprox. 135 W

Temperatura de funcionamiento
10°C a 40°C

Dimensiones Aprox. 451 × 471 × 461 mm (an/al/prf)
(17 7/8 × 18 5/8 × 18 1/4 pulgadas)

Peso Aprox. 25,5 kg (56 lb 3 oz)

Plug and Play DDC2B/DDC2Bi
GTF

Accesorios suministrados
Cable de alimentación
Este manual de instrucciones

ES

(continúa)

Modos predefinidos y de usuario

Cuando el monitor recibe una señal de entrada, hace coincidir automáticamente la señal con uno de los modos predefinidos en fábrica almacenados en la memoria del monitor para mostrar una imagen de alta calidad (consulte la “Tabla de temporización de modo predefinido (Preset mode timing table)” en la página i). Si las señales de entrada no se corresponden con ninguno de los modos predefinidos en fábrica, el monitor proporcionará automáticamente la imagen más adecuada a la señal de entrada que se encuentre dentro del margen de las frecuencias verticales u horizontales (página 7) correspondientes a la Generalized Timing Formula. Al ajustarse la imagen, los datos de ajuste se almacenarán como un modo de usuario y se recuperarán automáticamente siempre que se reciba la misma señal de entrada.

Función de ahorro de energía

Este monitor cumple con las directrices de ahorro de energía definidas por VESA, TCO’99 y ENERGY STAR. Si no se introduce ninguna señal en el monitor desde el ordenador, dicho monitor reducirá automáticamente el consumo de energía como se muestra a continuación.

Modo de alimentación	Consumo de energía	Indicador ① (alimentación)
funcionamiento normal	≤ 135 W	verde
activo inactivo*[1] (deep sleep)*[2]	≤ 3 W	naranja

*[1] Cuando el ordenador entra en el modo de ahorro de energía, aparece SIN SEÑAL en pantalla. Después de unos segundos, el monitor entra en el modo de ahorro de energía.

*[2] “Deep sleep” es un modo de ahorro de energía definido por la Agencia de protección del medio ambiente.

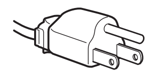
El diseño y las especificaciones están sujetos a cambios sin previo aviso.

Precauciones

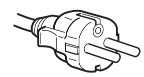
Advertencia sobre las conexiones de la alimentación

- Utilice el cable de alimentación suministrado. Si utiliza un cable de alimentación diferente, asegúrese de que es compatible con el suministro eléctrico local.
  Para los usuarios en EE.UU.
  Si no utiliza el cable apropiado, este monitor no cumplirá con las normas obligatorias de la FCC.

Ejemplo de tipos de enchufe



para 100 a 120 V CA



para 200 a 240 V CA

- Antes de desconectar el cable de alimentación, espere al menos 30 segundos tras desactivar la alimentación para permitir que se descargue la electricidad estática de la superficie de la pantalla.
- Tras activar la alimentación, la pantalla se desmagnetiza durante unos segundos. Esto genera un intenso campo magnético alrededor de la pantalla que puede afectar a los datos almacenados en discos y cintas magnéticas que se encuentren cerca del monitor. Asegúrese de mantener discos, cintas y equipos de grabación magnética alejados del monitor.

El equipo debe instalarse cerca de una toma de corriente de fácil acceso.

Instalación

No instale el monitor en los siguientes lugares:

- sobre superficies (alfombras, mantas, etc.) ni cerca de materiales (cortinas, tapices, etc.) que puedan bloquear los orificios de ventilación
- cerca de fuentes de calor, como radiadores o conductos de aire caliente, ni en lugares expuestos a la luz solar directa
- en lugares expuestos a cambios bruscos de temperatura
- en lugares sujetos a vibraciones mecánicas o golpes
- sobre una superficie inestable
- cerca de equipos que generen magnetismo, como transformadores o líneas eléctricas de alto voltaje
- cerca o sobre superficies metálicas con carga eléctrica
- dentro de un soporte cerrado

Mantenimiento

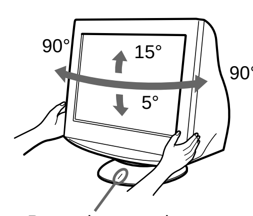
- Limpie la pantalla con un paño suave. Si utiliza un producto líquido de limpieza de cristales, no emplee ningún tipo de producto que contenga soluciones antiestáticas ni aditivos similares, ya que puede dañar el revestimiento de la pantalla.
- No frote, toque ni golpee la superficie de la pantalla con objetos afilados o abrasivos, como un bolígrafo o un destornillador. Este tipo de contacto puede rayar el tubo de imagen.
- Limpie el exterior, el panel y los controles con un paño suave ligeramente humedecido con una solución detergente poco concentrada. No utilice ningún tipo de estropajo abrasivo, detergente concentrado ni disolvente, como por ejemplo alcohol o bencina.

Transporte

Cuando transporte este monitor para su reparación o desplazamiento, utilice la caja de cartón y materiales de embalaje originales.

Uso del soporte basculante giratorio

Este monitor puede ajustarse en los ángulos que se muestran a la derecha. Para girar el monitor en vertical o en horizontal, agárrelo por la base con ambas manos. Al elevar verticalmente el ordenador, tenga cuidado de no pillarse los dedos en la parte posterior del monitor.



Punto de centrado

Appendix

Preset mode timing table

No.	Resolution (dots × lines)	Horizontal Frequency	Vertical Frequency	Graphics Mode
1	640 × 480	31.5 kHz	60 Hz	VGA-G
2	640 × 480	37.5 kHz	75 Hz	EVGA
3	640 × 480	43.3 kHz	85 Hz	VESA
4	720 × 400	31.5 kHz	70 Hz	VGA-Text
5	720 × 400	37.9 kHz	85 Hz	VESA
6	800 × 600	37.9 kHz	60 Hz	SVGA
7	800 × 600	46.9 kHz	75 Hz	VESA
8	800 × 600	53.7 kHz	85 Hz	VESA
9	832 × 624	49.7 kHz	75 Hz	Macintosh 16" Color
10	1024 × 768	48.4 kHz	60 Hz	VESA
11	1024 × 768	56.5 kHz	70 Hz	VESA
12	1024 × 768	60.0 kHz	75 Hz	EUVGA
13	1024 × 768	60.2 kHz	75 Hz	Macintosh 19" Color
14	1024 × 768	68.7 kHz	85 Hz	VESA
15	1152 × 864	67.5 kHz	75 Hz	VESA
16	1152 × 864	77.5 kHz	85 Hz	VESA
17	1152 × 870	68.7 kHz	75 Hz	Macintosh 21" Color
18	1280 × 960	60.0 kHz	60 Hz	VESA
19	1280 × 960	85.9 kHz	85 Hz	VESA
20	1280 × 1024	64.0 kHz	60 Hz	VESA
21	1280 × 1024	80.0 kHz	75 Hz	VESA
22	1280 × 1024	91.1 kHz	85 Hz	VESA
23	1600 × 1200	75.0 kHz	60 Hz	VESA
24	1600 × 1200	81.3 kHz	65 Hz	VESA
25	1600 × 1200	87.5 kHz	70 Hz	VESA
26	1600 × 1200	93.8 kHz	75 Hz	VESA
27	1600 × 1200	106.3 kHz	85 Hz	VESA

If the input signal does not match one of the factory preset modes above, the Generalized Timing Formula feature of this monitor will automatically provide an optimal image for the screen as long as the signal is GTF compliant.

TCO’99 Eco-document

■ Congratulations!

You have just purchased a TCO’99 approved and labelled product! Your choice has provided you with a product developed for professional use. Your purchase has also contributed to reducing the burden on the environment and also to the further development of environmentally adapted electronics products.

■ Why do we have environmentally labelled computers?

In many countries, environmental labelling has become an established method for encouraging the adaptation of goods and services to the environment. The main problem, as far as computers and other electronics equipment are concerned, is that environmentally harmful substances are used both in the products and during their manufacture. Since it is not so far possible to satisfactorily recycle the majority of electronics equipment, most of these potentially damaging substances sooner or later enter nature.

There are also other characteristics of a computer, such as energy consumption levels, that are important from the viewpoints of both the work (internal) and natural (external) environments. Since all methods of electricity generation have a negative effect on the environment (e.g. acidic and climate-influencing emissions, radioactive waste), it is vital to save energy. Electronics equipment in offices is often left running continuously and thereby consumes a lot of energy.

■ What does labelling involve?

This product meets the requirements for the TCO’99 scheme which provides for international and environmental labelling of personal computers. The labelling scheme was developed as a joint effort by the TCO (The Swedish Confederation of Professional Employees), Svenska Naturskyddsforeningen (The Swedish Society for Nature Conservation) and Statens Energimyndighet (The Swedish National Energy Administration).

Approval requirements cover a wide range of issues: environment, ergonomics, usability, emission of electric and magnetic fields, energy consumption and electrical and fire safety.

The environmental demands impose restrictions on the presence and use of heavy metals, brominated and chlorinated flame retardants, CFCs (freons) and chlorinated solvents, among other things. The product must be prepared for recycling and the manufacturer is obliged to have an environmental policy which must be adhered to in each country where the company implements its operational policy.

The energy requirements include a demand that the computer and/or display, after a certain period of inactivity, shall reduce its power consumption to a lower level in one or more stages. The length of time to reactivate the computer shall be reasonable for the user.

Labelled products must meet strict environmental demands, for example, in respect of the reduction of electric and magnetic fields, physical and visual ergonomics and good usability.

Below you will find a brief summary of the environmental requirements met by this product. The complete environmental criteria document may be ordered from:

TCO Development

SE-114 94 Stockholm, Sweden

Fax: +46 8 782 92 07

Email (Internet): development@tco.se

Current information regarding TCO’99 approved and labelled products may also be obtained via the Internet, using the address: http://www.tco-info.com/

■ Environmental requirements

Flame retardants

Flame retardants are present in printed circuit boards, cables, wires, casings and housings. Their purpose is to prevent, or at least to delay the spread of fire. Up to 30% of the plastic in a computer casing can consist of flame retardant substances. Most flame retardants contain bromine or chloride, and those flame retardants are chemically related to another group of environmental toxins, PCBs. Both the flame retardants containing bromine or chloride and the PCBs are suspected of giving rise to severe health effects, including reproductive damage in fish-eating birds and mammals, due to the bio-accumulative* processes. Flame retardants have been found in human blood and researchers fear that disturbances in foetus development may occur.

The relevant TCO’99 demand requires that plastic components weighing more than 25 grams must not contain flame retardants with organically bound bromine or chlorine. Flame retardants are allowed in the printed circuit boards since no substitutes are available.

Cadmium**

Cadmium is present in rechargeable batteries and in the colour-generating layers of certain computer displays. Cadmium damages the nervous system and is toxic in high doses. The relevant TCO’99 requirement states that batteries, the colour-generating layers of display screens and the electrical or electronics components must not contain any cadmium.

Mercury**

Mercury is sometimes found in batteries, relays and switches. It damages the nervous system and is toxic in high doses. The relevant TCO’99 requirement states that batteries may not contain any mercury. It also demands that mercury is not present in any of the electrical or electronics components associated with the labelled unit.

CFCs (freons)

The relevant TCO’99 requirement states that neither CFCs nor HCFCs may be used during the manufacture and assembly of the product. CFCs (freons) are sometimes used for washing printed circuit boards. CFCs break down ozone and thereby damage the ozone layer in the stratosphere, causing increased reception on earth of ultraviolet light with e.g. increased risks of skin cancer (malignant melanoma) as a consequence.

Lead**

Lead can be found in picture tubes, display screens, solders and capacitors. Lead damages the nervous system and in higher doses, causes lead poisoning. The relevant TCO’99 requirement permits the inclusion of lead since no replacement has yet been developed.

* Bio-accumulative is defined as substances which accumulate within living organisms.

** Lead, Cadmium and Mercury are heavy metals which are Bio-accumulative.

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Sony Corporation

Printed in USA

PRINTING THE SERVICE MANUAL

The PDF of this service manual is not designed to be printed from cover to cover. The pages vary in size, and must therefore be printed in sections based on page dimensions.

NON-SCHEMATIC PAGES

Data that does NOT INCLUDE schematic diagrams are formatted to 8.5 x 11 inches and can be printed on standard letter-size and/or A4-sized paper.

SCHEMATIC DIAGRAMS

The schematic diagram pages are provided in two ways, full size and tiled. The full-sized schematic diagrams are formatted on paper sizes between 8.5” x 11” and 18” x 30” depending upon each individual diagram size. Those diagrams that are LARGER than 11” x 17” in full-size mode have been tiled for your convience and can be printed on standard 11” x 17” (tabloid-size) paper, and reassembled.

TO PRINT FULL SIZE SCHEMATIC DIAGRAMS

If you have access to a large paper plotter or printer capable of outputting the full-sized diagrams, output as follows:

1) Note the page size(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your large format printer. Confirm that the printer settings are set to output the indicated page size or larger.

3) Close the Print Set Up screen and return to the File menu. Select “Print...” Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT TILED VERSION OF SCHEMATICS

Schematic pages that are larger than 11” x 17” full-size are provided in a 11” x 17” printable tiled format near the end of the document. These can be printed to tabloid-sized paper and assembled to full-size for easy viewing.

If you have access to a printer capable of outputting the tabloid size (11” x 17”) paper, then output the tiled version of the diagram as follows:

1) Note the page number(s) of the schematics you want to output as indicated in the middle window at the bottom of the viewing screen.

2) Go to the File menu and select Print Set-up. Choose the printer name and driver for your printer. Confirm that the plotter settings are set to output 11” x 17”, or tabloid size paper in landscape ( ) mode.

3) Close the Print Set Up screen and return to the File menu. Select “Print...” Input the page number of the schematic(s) you want to print in the print range window. Choose OK.

TO PRINT SPECIFIC SECTIONS OF A SCHEMATIC

To print just a particular section of a PDF, rather than a full page, access the Graphics Select tool in the Acrobat Reader tool bar.

1) To view the Graphics Select Tool, press and HOLD the mouse button over the Text Select Tool which looks like:
This tool will expand to reveal to additional tools.
Choose the Graphics Select tool by placing the cursor over the button on of the far right that looks like:

2) After selecting the Graphics Select Tool, place your cursor in the document window and the cursor will change to a plus (+) symbol. Click and drag the cursor over the area you want to print. When you release the mouse button, a marquee (or dotted lined box) will be displayed outlining the area you selected.

3) With the marquee in place, go to the file menu and select the “Print...” option. When the print window appears, choose the option under the section called “Print Range” which says “Selected Graphic”.

Select OK and the output will print only the area that you outlined with the marquee.

(continued >)

ON-SCREEN SEARCH OPTION

All of the text within the service manual PDF is content searchable. This means that you can enter any text, word, phrase or reference number that appears in the manual, and the PDF software will search, find and move the cursor to the location where you requested text first appears. This feature can be particularly useful in locating components on a specific schematic or printed wire circuit board (PWB) diagrams.

Follow these steps to effectively locate a component on a schematic diagram:

1) Locate the schematic you want to search by clicking on the corresponding bookmark on the left side of the screen. The view on the right of the screen will then jump to the desired schematic page.

2) Magnify the diagram to at least 400% before conducting a component search. This will enable you to easily view the reference number when it is highlighted on screen. To do this, click on the magnifying glass button on the tool bar at the top of the screen. Move the cursor over the diagram and RIGHT click you mouse. Select the 400% magnification option on the pop-up menu. Click on the button with the icon of the open hand to deactivate the magnification tool

3) Search the diagram (or the entire manual) by clicking on the binocular button tool at the top of the screen. The “Find” window will appear and allow you to type in your desired text. Type in a reference designator, such as R502, and click on the “Find” button. If the component is not on the diagram, but is listed anywhere else in the manual, the cursor will jump to the first location the text is found in the file. To find another instance of that same text, click on the binocular button again and select “Find Again.”

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL CPD-G410R

CPD-G410R

US/Canada Model

Chassis No: SCC-L42C-A

CPD-G410R

US/Canada Model

Chassis No: SCC-L42H-A

19CRV CHASSIS

ORIGINAL MANUAL ISSUE DATE: 8/2001

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
8/2001	No revisions or updates are applicable at this time.	

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